

Anna Szilágyi-Nagy

Constructing Landscapes Communicatively

The Role of Serious Games in Implementing the European Landscape Convention's Vision of Public Participation in Landscape Issues



Constructing Landscapes Communicatively: The Role of Serious Games in Implementing the European Landscape Convention's Vision of Public Participation in Landscape Issues

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Abstract

This dissertation explores how *serious participatory landscape games*—fully fledged games designed or adapted to support participation among citizens, stakeholders, and experts in landscape issues (Szilágyi-Nagy, 2022)—can advance the European Landscape Convention’s vision of democratic landscape governance (Council of Europe, 2000a). It examines how such games shape small-group communication, foster shared meaning-making, and facilitate equitable, reasoned dialogue towards collective action about the future of landscapes, addressing key challenges of the Convention—namely, engaging diverse publics, acknowledging their landscape experiences and values, and translating them into shared visions and decisions.

To address these challenges, the dissertation pursues three interrelated aims:

1. **Practice-oriented:** To explore how game design and facilitation influence small-group communication in serious participatory landscape games.
2. **Methodological:** To develop a method for visualizing and analyzing small-group communication processes in these games.
3. **Theoretical:** To conceptualize serious participatory landscape games—through social constructivist and communicative action theories—as communicative environments that advance the European Landscape Convention’s vision of democratic landscape governance.

The dissertation examines *Urbanity*, a Hungarian analogue street-debate game (építészfórum, 2016, February 8, 2021, May 3; kultúrAktív Egyesület, 2015, August 28; Szilágyi-Nagy & Tóth, 2017; Tóth & Szilágyi-Nagy, 2021), and its four prototypes—*Clash*, *Parliament*, *Tactic Dice*, and *Tactic Card*—as a collective instrumental case study designed to generate transferable insights into how analogue, face-to-face games can support equitable, reasoned, and reflective small-group communication for the joint construction of landscape meanings and actions in democratic landscape governance. Each prototype was analyzed through (1) visual examination of in-game small-group interaction, (2) thematic analysis of design and facilitation processes, and (3) theoretical reflection informed by small-group communication theory in games (Duke, 1974), social constructivist landscape theory (Berger & Luckmann, 1966; Kühne, 2015b, 2019b, 2019c), and communicative action theory (Habermas, 1984, 1987, 1990b). Synthesizing the findings across the four cases, the study generated three main contributions:

1. **Practical:** Actionable design and facilitation guidance for small-group communication-centered game development (*Game Design Catalogue*, *Facilitation Guide*).
2. **Methodological:** A spatio-temporal visual method for analyzing the communication structure and interaction patterns of in-game small-group

communication within the game's spatial context (*Communication Pattern Analysis Method*).

3. **Theoretical:** An integrative framework showing how such games create environments where landscape meanings and actions are co-constructed through coercion-free, equitable, and reasoned argumentation oriented toward mutual understanding and the harmonization of actions.

The dissertation is structured into six parts. Part I: Introduction outlines the research context, theoretical background, aims, and relevance. Part II: Literature Review examines literature on the European Landscape Convention, serious participatory landscape games, and small-group communication theory, and identifies key knowledge, methodological, and theoretical gaps. Part III: Theoretical Framework and Methodology presents the methodological design and integrates the three main theories into a triangulated analytical framework. Part IV: Analysis introduces the game *Urbanity* in the participatory context of Hungarian landscape governance, followed by a chapter-by-chapter analysis of four selected prototypes through visual, thematic, and theory-reflective lenses. Part V: Findings presents the practical, methodological, and theoretical outcomes: the *Game Design Catalogue* and *Facilitation Guide* (practical), the *Communication Pattern Analysis Method* (methodological), and an integrative framework for the communicative construction of landscape meanings and actions (theoretical). Part VI: Discussion and Conclusions revisits the research questions and discusses broader implications for democratic landscape governance.

The study concludes that when designed and facilitated with small-group communication in mind, serious participatory landscape games can enable participants to express, negotiate, and align diverse landscape meanings and knowledge stocks through equitable, reasoned, and reflective dialogue—turning play into a “collective democratic exercise whereby differences are accepted, common characteristics found, and operational compromises eventually reached” (Council of Europe, 2008, II.2.3.A). By linking game design, small-group communication, landscape, and democratic theory, this dissertation contributes to operationalizing the European Landscape Convention's vision of inclusive, deliberative landscape governance—advancing the communicative construction of landscape meanings and actions through serious games.

Kurzfassung

Diese Dissertation untersucht, wie *Serious Participatory Landscape Games* – voll ausgearbeitete Spiele, die entwickelt oder adaptiert wurden, um die Beteiligung von Bürger:innen, Interessengruppen und Fachleuten an Landschaftsfragen zu unterstützen (Szilágyi-Nagy, 2022) – die Vision einer demokratischen Landschaftsverwaltung des Europäischen Landschaftsübereinkommens (Council of Europe, 2000a) voranbringen können. Sie analysiert, wie solche Spiele die Kommunikation in Kleingruppen gestalten, gemeinsam Bedeutungen entstehen lassen und einen gerechten, begründeten Dialog hin zu kollektiven Handlungen über die Zukunft von Landschaften ermöglichen – und zwar unter Berücksichtigung zentraler Herausforderungen des Übereinkommens, namentlich der Einbindung vielfältiger Öffentlichkeiten, der Anerkennung ihrer Landschaftserfahrungen und Werte sowie deren Übersetzung in gemeinsame Visionen und Entscheidungen.

Um diesen Herausforderungen zu begegnen, verfolgt die Dissertation drei miteinander verknüpfte Ziele:

1. **Praxisorientiert:** Zu untersuchen, wie Spielgestaltung und Moderation die Kommunikation in Kleingruppen bei *Serious Participatory Landscape Games* beeinflussen.
2. **Methodisch:** Eine Methode zu entwickeln, um Kommunikationsprozesse in Kleingruppen dieser Spiele zu visualisieren und zu analysieren.
3. **Theoretisch:** *Serious Participatory Landscape Games* – unter Bezugnahme auf sozialkonstruktivistische und Handlungstheorien der kommunikativen Vernunft – als kommunikative Umgebungen zu konzeptualisieren, die die demokratische Landschaftsverwaltung gemäß dem Europäischen Landschaftsübereinkommen unterstützen.

Die Untersuchung basiert auf dem analogen Straßendebattenspiel **Urbanity**, einem ungarischen Format (építészfórum, 2016, February 8, 2021, May 3; kultúrAktív Egyesület, 2015, August 28; Szilágyi-Nagy & Tóth, 2017; Tóth & Szilágyi-Nagy, 2021) und dessen vier Prototypen – **Clash**, **Parliament**, **Tactic Dice** und **Tactic Card** – als kollektive instrumentelle Fallstudie, die darauf abzielt, übertragbare Erkenntnisse dafür zu gewinnen, wie analoge FacetoFace-Spiele gerechte, begründete und reflektierte Kommunikation in Kleingruppen sowie die gemeinsame Konstruktion von Landschaftsbedeutungen und -handlungen in partizipativer Landschaftsverwaltung unterstützen können. Jeder Prototyp wurde analysiert anhand von (1) visueller Untersuchung der Kleingruppeninteraktion im Spiel, (2) thematischer Analyse der Gestaltungs- und Moderationsprozesse, und (3) theoretischer Reflexion auf Grundlage der Kleingruppenkommunikationstheorie in Spielen (Duke, 1974), sozialkonstruktivistischer Landschaftstheorie (Berger & Luckmann, 1966; Kühne, 2015b, 2019b, 2019c) und der Theorie des kommunikativen Handelns (Habermas, 1984, 1987,

1990b). Durch die Synthese der Erkenntnisse aus den vier Fällen formulierte die Studie drei zentrale Beiträge:

1. **Praktisch:** Umsetzbare Leitlinien für Spiel und Moderationsgestaltung mit Fokus auf Kleingruppenkommunikation (*Game Design Catalogue, Facilitation Guide*).
2. **Methodisch:** Eine raumzeitlich visuelle Methode zur Analyse der Kommunikationsstruktur und Interaktionsmuster von Kleingruppenkommunikation im Spielkontext (*Communication Pattern Analysis Method*).
3. **Theoretisch:** Ein integratives Rahmenwerk, das zeigt, wie solche Spiele Umgebungen schaffen, in denen Landschaftsbedeutungen und -handlungen durch gewaltfreie, gleichberechtigte und begründete Argumentation entstehen, ausgerichtet auf gegenseitiges Verständnis und Harmonisierung von Handlungen.

Die Dissertation ist in sechs Teile gegliedert: Teil I – Introduction – führt in den Forschungskontext, den theoretischen Hintergrund, die Zielsetzungen und die Relevanz ein. Teil II – Literature Review – untersucht die Literatur zum Europäischen Landschaftsübereinkommen, zu Serious Participatory Landscape Games sowie zur Theorie der Kleingruppenkommunikation und identifiziert zentrale Wissens, Methoden und Theorielücken. Teil III – Theoretical Framework and Methodology – stellt das methodische Design vor und integriert die drei Haupttheorien in einen triangulierten Analyserahmen. Teil IV – Analysis – führt das Spiel **Urbanity** im partizipativen Kontext der ungarischen Landschaftsverwaltung ein, gefolgt von einer kapitelweisen Analyse der vier ausgewählten Prototypen durch visuelle, thematische und theoretische Ansätze. Teil V – Findings – präsentiert die praktischen, methodischen und theoretischen Ergebnisse: den *Game Design Catalogue* und *Facilitation Guide* (praktisch), die *Communication Pattern Analysis Method* (methodisch) und ein integratives Rahmenwerk zur kommunikativen Konstruktion von Landschaftsbedeutungen und -handlungen (theoretisch). Teil VI – Discussion and Conclusions – greift die Forschungsfragen erneut auf und diskutiert die weitergehenden Implikationen für demokratische Landschaftsverwaltung.

Die Studie kommt zu dem Schluss, dass Serious Participatory Landscape Games, sofern sie mit Blick auf Kleingruppenkommunikation gestaltet und moderiert werden, Teilnehmende dazu befähigen können, vielfältige Landschaftsbedeutungen und Wissensbestände durch gerechtfertigten, reflektierten Dialog auszudrücken, zu verhandeln und in Einklang zu bringen – und damit Spiel in eine „kollektive demokratische Übung, in der Unterschiede akzeptiert, Gemeinsamkeiten gefunden und tragfähige Kompromisse erreicht werden“ (Council of Europe, 2008, II.2.3.A) verwandeln. Durch die Verknüpfung von Spieldesign, Kleingruppenkommunikation, Landschaft und Demokratietheorie leistet diese Dissertation einen Beitrag zur Operationalisierung der Vision des Europäischen Landschaftsübereinkommens einer inklusiven, deliberativen Landschaftsverwaltung – und zwar durch die kommunikative Konstruktion von Landschaftsbedeutungen und -handlungen mittels Serious Games.

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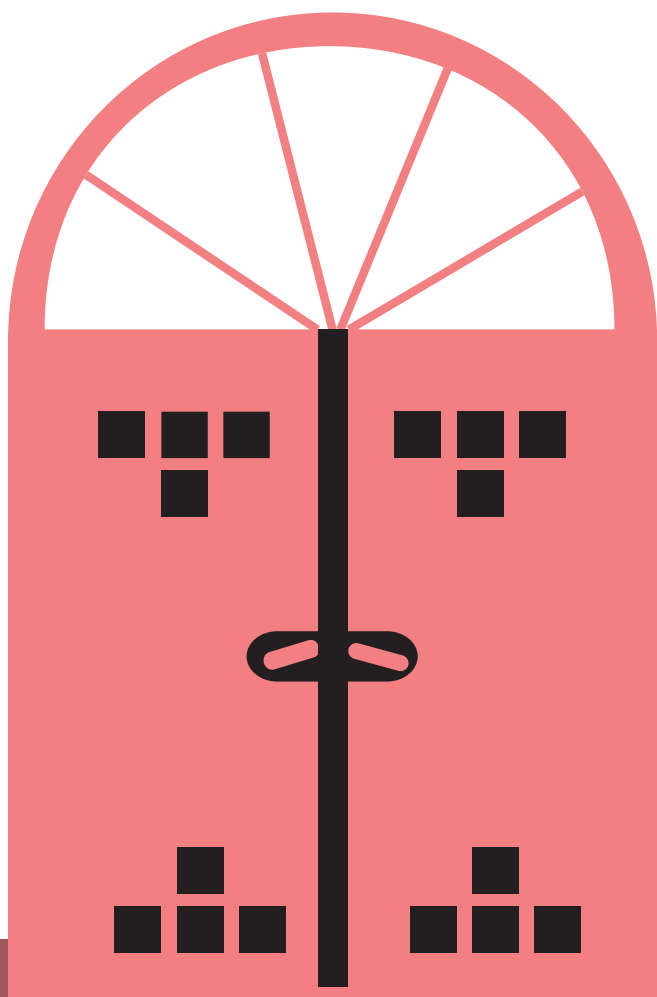
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Part I. **Introduction**

1

Introduction

This chapter situates the research within its conceptual, theoretical, and contextual foundations. It begins by reviewing how games have been used as tools for serious and structured participation in landscape matters, framed by the European Landscape Convention (Section 1.1), and identifies three key research gaps (Section 1.2). It then presents the theoretical framework (Section 1.3), outlines the research motivation (Section 1.4), and defines the study's aims and guiding questions (Sections 1.5–1.6). Finally, it clarifies the research's relevance, scope, and limitations (Section 1.7–1.8), and concludes by defining key terms, abbreviations, and visual coding conventions (Section 1.9–1.10) used throughout the dissertation.

1.1 State of Research on Games in the Context of the European Landscape Convention

Public participation plays a central role in landscape governance, as emphasized by the European Landscape Convention—a policy framework promoting democratic and participatory approaches to the planning, management, and protection of landscapes (Council of Europe, 2000a, Article 5(c); 2000b, 2017b, 2018a, 2018b; Prieur, 2006). Article 1(a) defines *landscape* as “an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors” (Council of Europe, 2000a). Viewed through a social constructivist lens (Berger & Luckmann, 1966; Cosgrove, 1984; Kühne, 2018b, 2019c), this definition positions landscape not merely as a physical entity but as a phenomenon shaped by social meaning, cultural practice, and shared experience. Participation is therefore not only procedural—it is a mechanism through which diverse landscape meanings are negotiated and embedded in policy and practice.

To operationalize this commitment, the Convention identifies four interlinked stages of participation:

- gathering landscape knowledge (including subjective perspectives);
- defining shared landscape quality objectives;
- implementing policies for planning and management; and
- monitoring changes to ensure responsiveness (Council of Europe, 2008, II.2).

Although signatories have flexibility in how they engage the public—employing participatory, deliberative, or interactive strategies across these stages (Council of Europe, 2018a, p. 67)—the transition away from expert-driven traditions has remained slow and complex (Arler, 2008; Butler & Calderon, 2016; Egoz et al., 2018a; Jones, 2011; Luginbühl, 2017; Olwig, 2007).

To bridge this gap, a variety of tools have been developed to elicit and integrate public perspectives into landscape governance, including participatory mapping, landscape biographies, walking interviews, poetic narratives, and exploratory scenario workshops (Baas et al., 2011; Clemetsen & Schibbye, 2016; Egoz et al., 2018a; Fiskevold, 2016; Geelmuyden, 2016; Jones & Stenseke, 2011a; Jørgensen et al., 2016; Kolen et al., 2016; Ramos, 2011). While these approaches foster experiential and inclusive engagement, they often struggle to structure dialogue, reconcile conflicting values, or translate participatory insights into policy (Stenseke & Jones, 2011).

In response, *serious participatory landscape games* have gained prominence as structured communication environments for dialogue, deliberation, and collaborative decision-making. Defined as games designed or adapted to support public or stakeholder engagement in landscape issues (Szilágyi-Nagy, 2022), these interactive formats enable small groups—experts, stakeholders, or citizens—to express perspectives, explore options, navigate conflict, and co-create solutions in realistic yet safe settings (Abt, 1987; Duke, 1974; Duke & Geurts, 2003b; Feldt, 2014; Sanoff, 1979; Szilágyi-Nagy & Tóth, 2017).

Developed as early as the 1960s, such games have taken many forms—digital (Gordon et al., 2016), computer-assisted (Abt, 1987, pp. 91–94), analog (Ampatzidou & Gugerell, 2018), solo (Poplin, 2014), and multiplayer (Tóth & Szilágyi-Nagy, 2021). They have been applied across diverse contexts, from schoolyard redesign and neighborhood planning to regional water management and cross-border infrastructure development (Abt, 1987; Brković Dodig & Groat, 2021b; Duke, 1974; Duke & Geurts, 2003b; Sanoff, 1979).

Analog and computer-assisted formats are particularly valued for fostering small-group interaction and collaboration. They structure communication, negotiation, and joint decision-making among participants addressing complex landscape challenges (Duke, 1974; Sanoff, 1979; Tan, 2017). Such games help participants envision and explore alternative futures and co-design solutions—closely aligning with the Convention’s participatory ideals (Council of Europe, 2000a, Article 5(c)).

Although research on these games is expanding, it has predominantly focused on outcomes—such as co-designed proposals, increased trust among players, or player satisfaction—rather than on the communicative processes that lead to these results (Duke & Kriz, 2014; Gordon & Baldwin-Philippi, 2014; Poplin, 2012; Sanoff, 1979; Tan, 2014). A few studies examine small-group communication and interaction patterns during gameplay (Duke, 1974; Duke & Geurts, 2003a), yet these typically capture isolated moments rather than communication dynamics unfolding over the entire session. Furthermore, design elements—such as spatial layout, rules, and facilitation—remain underexamined in terms of how they shape meaning-making and inclusive, deliberative dialogue in alignment with the Convention’s participatory vision.

1.2 Research Gaps

Despite advances in practice, critical gaps remain in understanding how serious participatory landscape games support small-group communication during problem-solving and decision-making about landscape issues. This review identifies three interrelated areas requiring further inquiry:

1. **Knowledge gap:** Limited understanding exists of how game design and facilitation jointly structure small-group communication throughout the full duration of gameplay, including how spatial configuration and interaction dynamics influence these processes (Duke, 1974; Duke & Geurts, 2003b; Lerner, 2014; McGonigal, 2012).
2. **Methodological gap:** Existing analytical tools insufficiently capture the spatial, temporal, and procedural characteristics of small-group communication during gameplay (Bales, 1951; Duke & Geurts, 2003b; Fine, 1983; Narula, 2006; Pavitt & Curtis, 1998; Poole, 1999), calling for methods that can visually represent the evolving flow of interaction.
3. **Theoretical framing gap:** Games are frequently deployed without robust theoretical grounding. This research addresses that shortcoming by integrating social constructivist landscape theory (Berger & Luckmann, 1966; Cosgrove, 1984; Kühne, 2018b, 2019c) and communicative action theory (Habermas, 1984, 1987, 1990b) to assess how games support shared meaning-making and inclusive decision-making in line with the Convention's participatory vision.

1.3 Theoretical Framework

This research draws on three complementary theoretical lenses:

1. **Theory of games as communicative environments for small-group interaction** (Duke, 1974; Duke & Geurts, 2003b), providing an empirically grounded framework for analyzing how games structure players' interactions.
2. **Social constructivist landscape theory** (Cosgrove, 1984; Kühne, 2018b, 2019b, 2019c), explaining how landscape meanings are negotiated through communicative interaction and supporting the analysis of how landscape understanding is co-constructed during gameplay.
3. **Communicative action theory** (Habermas, 1984, 1987, 1990b), offering normative criteria—such as equitable participation, reason-giving, and consensus—for evaluating whether in-game dialogue approximates ideal deliberation.

Together, these perspectives enable a multidimensional analysis—empirical, interpretive, and normative—aligning with the identified research gaps and supporting a deeper understanding of how game design shapes small-group communication, decision-making, and problem-solving about landscape issues.

1.4 Research Motivation

My interest in participatory design began during an internship in Germany (2012), where simple facilitation tools—Post-its, group discussions, and public forums—helped communities articulate visions and negotiate ideas. Upon returning to Hungary in 2014 to work in the municipal planning office of Törökbalint, I observed a notable disconnect: public forums often struggled to foster meaningful dialogue, structure debate, or influence decision-making.

This experience led me to collaborate with kultúrAktív Egyesület to explore creative youth engagement through role-play, participatory walks, and urban modeling. A pivotal moment came in late 2014 with the creation of **Urbanity**, an analog street debate game designed to facilitate public conversations about urban landscapes. When tested in pedestrian settings—among strangers—the game consistently generated constructive dialogue, deep engagement, and collaborative decision-making.

That experience sparked a central guiding question: Why do games enable better communication and decision-making than traditional methods? This initial curiosity evolved into a structured research inquiry addressing how serious participatory landscape games shape dialogue, enable negotiation, and contribute to inclusive landscape governance.

1.5 Aims and Objectives

This research aims to advance understanding of how serious participatory landscape games (Szilágyi-Nagy, 2022) support small-group communication among players engaged in problem-solving and decision-making related to landscape protection, management, and planning. It aligns with the European Landscape Convention’s (Council of Europe, 2000a) vision of democratic landscape governance and addresses three interrelated gaps—practice-oriented empirical, methodological, and theoretical—through the following aims.

Table 1.1 summarizes the aims, their orientations, and corresponding objectives.

Table 1.1 Research aims and objectives. Table by the author.

Aim and Orientation	Research Objectives
Aim 1 (Practice-oriented) To explore how game design and facilitation influence small-group communication in serious participatory landscape games.	Reconstruct the development of Urbanity , including its prototypes and key design decisions.
	Analyze how different prototype designs and facilitation modes influence the structure and interaction of small groups communicating about landscape issues.
	Develop design and facilitation guidelines for creating communication-centered serious participatory landscape games that support collaborative problem-solving and decision-making.

Aim and Orientation	Research Objectives
Aim 2 (Methodological) To develop a method for visualizing and analyzing small-group communication processes in these games.	Review existing approaches to analyzing small-group communication and interaction patterns in games.
	Develop a visual analysis framework that captures both temporal flow and spatial configuration, extending Duke's (1974) communication-pattern method.
	Test and refine this framework by visualizing multiple Urbanity prototypes.
Aim 3 (Theoretical) To conceptualize serious participatory landscape games—through social constructivist and communicative action theories—as communicative environments that advance the European Landscape Convention's vision of democratic landscape governance.	Analyze how Urbanity facilitates processes of landscape meaning-making and the mediation of differentiated knowledge stocks, using social constructivist landscape theory (Berger & Luckmann, 1966; Kühne, 2018b, 2019b, 2019c)
	Examine how in-game communication in Urbanity reflects the deliberative qualities of equality, reason-giving, and mutual understanding, based on communicative action theory (Habermas, 1984, 1987, 1990b).
	Synthesize these theoretical perspectives into a conceptual framework that explains how serious participatory landscape games can function as communicative environments advancing the democratic landscape-governance vision of the European Landscape Convention (Council of Europe, 2000a).

Through these aims, the research integrates practice, method, and theory into a coherent framework for understanding and enhancing the communicative quality of serious participatory landscape games. the inquiry is grounded in a longitudinal instrumental case study of the **Urbanity** street-debate game (Építészforum, 2016, February 8, 2021, May 3; kultúrAktív Egyesület, 2015, August 28; Szilágyi-Nagy & Tóth, 2017; Tóth & Szilágyi-Nagy, 2021), which serves as the empirical foundation for the aims and objectives summarized above.

These aims establish the basis for the research questions outlined in Section 1.6.

1.6 Research Questions

The study is guided by three overarching research questions that build directly on the aims and objectives introduced in Section 1.5. Together, they frame the inquiry across the practical, methodological, and theoretical dimensions of the research, explored through the longitudinal case study of **Urbanity**.

Table 1.2 presents the relationship between the research aims, their orientations, the main research questions, and the related sub-questions.

Table 1.2 Research aims and research questions. Table by the author.

Aim and Orientation	Main Research Question	Sub-Questions
Aim 1 (Practice-oriented)	How do game design and facilitation shape small-group communication in serious participatory landscape games?	Which Urbanity prototypes best support the analysis of small-group communication?
		How does the design and facilitation of Urbanity shape small-group communication about landscape issues?
		What can the development and testing of Urbanity reveal about designing and facilitating serious participatory landscape games for small-group communication?
Aim 2 (Methodological)	How can small-group communication processes in serious participatory landscape games be visualized and analyzed?	What existing approaches are available for analyzing small-group communication in games, and what are their limitations?
		How can a visual method be designed to capture the temporal flow and spatial structure of communication during gameplay, and how does it perform when applied to different Urbanity prototypes?
		How can these visualizations enhance the understanding of small-group communication in games?
Aim 3 (Theoretical)	How can communication in serious participatory landscape games be theoretically framed—through social constructivist and communicative-action theories—as communicative environments that advance the democratic landscape-governance vision of the European Landscape Convention?	How does communication in Urbanity facilitate meaning-making and the mediation of differentiated knowledge stocks, as interpreted through social constructivist landscape theory?
		To what extent does in-game interaction in Urbanity reflect the principles of equality, rational argumentation, and mutual understanding, as defined by communicative action theory?
		How can the theoretical synthesis of social constructivist and communicative-action perspectives contribute to framing serious participatory landscape games as communicative environments that support democratic landscape governance in line with the European Landscape Convention?

Together, these aims and questions form the analytical framework of the research, linking design experimentation, methodological innovation, and theoretical interpretation in the case study of **Urbanity**.

1.7 Relevance of the Research

This research addresses key gaps in the application of serious participatory landscape games within participatory landscape governance and offers contributions across theoretical, methodological, and practical domains of knowledge.

- **Knowledge relevance:** Although games are increasingly used in participatory landscape governance, little is known about how their design and facilitation support small-group communication. This study addresses this gap by providing empirical insights into how serious participatory landscape games structure dialogue, negotiation, and shared decision-making. It contributes to game design, landscape architecture and communication science.
- **Methodological relevance:** Existing methods for analyzing small-group communication in games often focus on static content or oversimplified interaction types—such as monologue, dialogue, or multilogue—while overlooking how communication evolves structurally over time and space. This research responds to this limitation by developing a visual analysis method tailored to serious participatory landscape games. The *Communication Pattern Analysis Method* models the unfolding of communication during gameplay, capturing spatial configurations, temporal progression, and dynamic interaction structures. It thus contributes a new empirical tool for studying face-to-face communication of small groups in games or in other participatory contexts.
- **Theoretical relevance:** Serious participatory landscape games are often applied for participatory purposes without a clearly articulated conceptual foundation. This research provides a robust theoretical framing by integrating social constructivist landscape theory and communicative action theory, situating games within the participatory model promoted by the European Landscape Convention (Council of Europe, 2000a). It thereby clarifies both why and how games support meaning-making and deliberation in landscape governance.
- **Practical relevance:** Through the reconstruction and analysis of *Urbanity*, this study offers practical guidance for designers, facilitators, and planners working with serious participatory landscape games. the resulting *Game Design Catalogue* and *Facilitation Guide* translate theoretical insights into applied tools for creating inclusive, deliberative, and context-sensitive communication environments for small groups working on landscape issues. these resources directly support the implementation of serious participatory landscape games in alignment with the democratic aims of the European Landscape Convention.

1.8 Limitations of the Research

- **Case specificity and generalizability:** This study is based on *Urbanity*, a Hungarian street debate game. While the case provides rich empirical insights, its findings may not be fully generalizable to other serious participatory landscape games with different mechanics, settings, or cultural conditions.
- **Scope and applicability of visual analysis:** The visual framework developed in this research effectively models interaction patterns in *Urbanity*,

yet its applicability to other game formats or participatory tools remains untested. Further studies are needed to validate and adapt the method beyond this case.

- **Data constraints due to archival reliance:** The research relies primarily on archival materials gathered during the development of *Urbanity*, as COVID-19 restrictions at the time prevented small-group, face-to-face sessions. Consequently, no audio recordings or detailed transcripts were collected, which limits the analysis of conversational content, turn-taking, and participants' subjective experiences during gameplay.
- **Contextual interpretation of participatory culture:** *Urbanity* was developed within the Hungarian sociopolitical context, which may differ from participatory planning practices and landscape governance cultures in other regions. While the study aligns with the European Landscape Convention, its conclusions are likely most applicable to European contexts with comparable institutional and cultural structures.

1.9 Glossary of Key Terms, Abbreviations, and Theoretical Concepts

This glossary defines key terms, analytical concepts, and game-related expressions used throughout the dissertation. Given the interdisciplinary nature of the research—drawing on social constructivist landscape theory, communicative action theory, small-group communication theory in games, and game design—it clarifies how terms are used in this specific context. In addition to established theoretical concepts, the glossary includes game mechanisms and communication patterns empirically identified through the analysis of *Urbanity* prototypes.

1.9.1 Key Organizations and Policy Frameworks

- **Council of Europe:** An international organization founded in 1949 to promote human rights, democracy, and the rule of law across its member states (Council of Europe, 1972). It initiated the European Landscape Convention.
- **European Landscape Convention:** A voluntary policy framework developed by the Council of Europe to promote public participation in landscape governance (Council of Europe, 2000a).
- **Member States:** Countries that are parties to the Council of Europe. Not all member states ratify every convention.
- **United Nations (UN):** An international organization founded in 1945 to support international cooperation in peace, sustainability and governance (United Nations, 1945, June 26).
- **United Nations Economic Commission for Europe (UNECE):** A regional commission of the United Nations focusing on economic and environmental policy in Europe and Central Asia.

1.9.2 Key Terms from Serious Participatory Landscape Games

- **Serious participatory landscape games:** A category of serious games designed to engage participants in structured discussion, negotiation, and decision-making about landscape issues, with the aim of fostering dialogue and collective understanding (Szilágyi-Nagy, 2022).
- **Prototype:** An operational, testable version of a game concept used in iterative design and refinement (Fullerton, 2019, p. 203).
- **Game mechanics:** The set of rules, actions, and control structures that shape player behavior and interaction within a game (Hunicke et al., 2004, p. 3; Lo et al., 2021, p. 6).
- **Game designer:** The person responsible for creating the structure, rules, and content of a game. In serious participatory landscape games, the designer ensures that the mechanics, materials, and narrative align with the intended learning, communication, or decision-making objectives (Fullerton, 2019, p. 3).
- **Game facilitator:** The person who guides participants through the gameplay process, ensuring that rules are understood, the flow of activities is maintained, and the intended participatory or learning outcomes are achieved. In landscape-related contexts, facilitators also mediate discussions and help participants connect game experiences to real-world issues (Baalsrud Hauge et al., 2021).

1.9.3 *Urbanity* Game Mechanics

The following mechanisms recur across different *Urbanity* prototypes:

- **Rhythmic Random Encounter:** A movement-based interaction pattern in *Clash* in which players rotate around bowls in opposite directions, guided by a gong rhythm. At each step, players briefly acknowledge one another nonverbally and assess whether *party time* is triggered.
- **Party time:** game mechanism in the *Clash* prototype of *Urbanity*. During *rhythmic random encounters*—where players move in opposite circular directions around bowls—*party time* is triggered when a player's team color aligns with the color of the building materials in a bowl. When this occurs, two players verbally announce *party time*, temporarily shifting gameplay from movement-based interaction to a question-based exchange.
- **Earthquake:** A facilitator-initiated mechanism used to re-energize gameplay when interaction slows down. In *Clash*, earthquake is signaled by a sudden acceleration of the gong rhythm, allowing players to reposition freely, form new groupings, or avoid direct *opinion clashes*.
- **Knobstick:** A proposed but ultimately unused rule-based mechanism in *Tactic Dice*. During an *opinion duel*, knobstick would have allowed the

questioning team to override opposing viewpoints and secure the full score for the round.

1.9.4 Communication Patterns Identified in *Urbanity*

- **Opinion clash:** A communication pattern in which participants simultaneously express a yes-or-no stance—on the count of three—through gestures or brief verbal cues. While ensuring formal equality of participation, this pattern suspends interaction and justification, resulting in binary expressions of agreement or disagreement that perform difference rather than examine it.
- **Opinion duel (modified opinion clash):** A communication pattern that modifies the *opinion clash* by linking its outcome to scoring and by framing disagreement as a focused confrontation between selected representatives.
- **Voting (modified opinion clash):** A communication pattern used to conclude debates by requiring participants to express a binary stance (e.g., yes/no) simultaneously. While preserving formal equality, voting suspends further justification and transforms communicative disagreement into a collective decision or point allocation.
- **Defense speech:** A format in which one speaker presents a single argument before any response is allowed, introducing justification while constraining reciprocity and emphasizing persuasion over dialogue.
- **Open debate:** A collective discussion phase in which participants can question, refine, and respond to one another's arguments, approximating deliberative discourse under conditions of uneven access. Active facilitation is required to moderate participation and balance speaking opportunities.
- **Structured debate:** A procedurally organized debate format in which deliberation is regulated through design and facilitation (e.g., prescribed speaking turns, time limits, and voting procedures).

1.9.5 Key Analytical Terms for Small-Group Communication in Games

The following terms are used as analytical categories to describe and visualize how small-group communication unfolds during gameplay.

- **Pulse:** A shared issue or problem that initiates communication and provides a focal point for interaction (Duke, 1974, p. 23).
- **Communication Steps:** Distinct gameplay phases in which communication becomes analytically distinguishable, marked by changes in rules, movement patterns, or group configurations.

- **Snapshots:** The smallest observable moments of communication within a step, used to capture interaction dynamics in detail.
- **Loop:** Recurrent cyclical structures at snapshot or step level that shape rhythm, repetition, and procedural complexity in gameplay.
- **Communication zones:** Temporary spatial and social areas in which active dialogue occurs, indicating inclusion and exclusion during gameplay.

1.9.6 Key Concepts from Social Constructivist Landscape Theory

After Berger and Luckmann (1966) and Kühne (2018b, 2019b, 2019c):

- **Externalization:** The process of expressing internal meanings in shared, intersubjective form.
- **Objectivation:** The stabilization of shared meanings into institutions, norms, or spatial forms.
- **Internalization:** The incorporation of objectivated meanings into individual worldviews.
- **Knowledge stock:** A socially shared repository of typifications, values, and assumptions that enable interpretation.
- **Physical Space:** The material environment, including topography, infrastructure, and vegetation.
- **Social Landscape:** The collectively constructed layer of meanings and norms through which landscapes are interpreted.
- **Individually Actualized Landscape:** The subjective perception and emotional experience of landscape.
- **Appropriated Physical Landscape:** The material environment as interpreted, used, and transformed through socially and culturally mediated meanings, practices, and actions. Appropriation links physical space to lived experience by embedding values, norms, and intentions into material settings.
- **Landscape socialization phases:** Stages through which individuals acquire landscape-related meanings, shaping how they perceive, interpret, and evaluate environments.
 - **Primary:** Early, emotionally grounded experiences forming intuitive attachments to landscape.
 - **Secondary:** Culturally and institutionally mediated interpretations, including shared narratives, stereotypes, and norms.
 - **Tertiary:** Expert, professional, or scientific understandings acquired through formal education or practice.

1.9.7 Key Concepts from Communicative Action Theory

After Habermas (1984, 1987, 1990b):

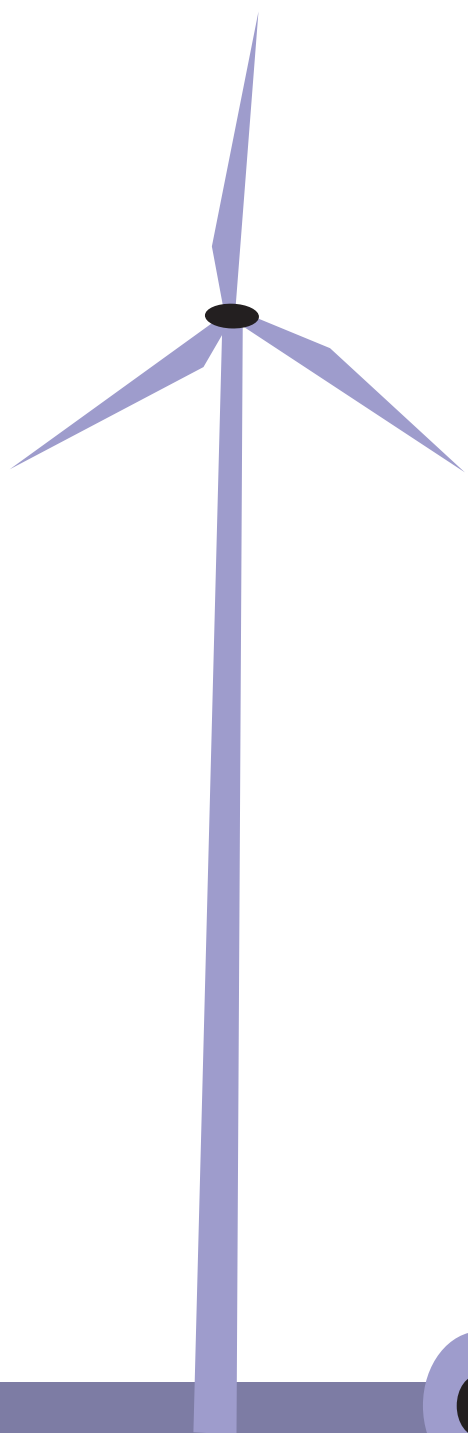
- **Communicative action (Kommunikatives Handeln):** Interaction oriented toward mutual understanding and the coordination of action through reasoned exchange.
- **Strategic action (Strategisches Handeln):** Communication oriented toward achieving personal or instrumental goals, treating others primarily as means rather than partners in understanding.
- **Mutual understanding (Verständigung):** Shared interpretation achieved through rational discussion.
- **Agreement (Einigung):** The rational acceptance of a proposal or norm.
- **Consensus (Einverständnis):** Deep collective affirmation that includes the alignment of underlying values.
- **Emotional resonance (Gleichgestimmtheit):** Shared affective states that arise without explicit reasoning.
- **Concurrence (Übereinstimmung):** Intuitive or coincidental agreement not grounded in deliberation.
- **Lifeworld (Lebenswelt):** The shared cultural and social background that makes meaningful communication possible.
- **Validity claims (Geltungsansprüche):** The implicit conditions raised in communicative acts and subject to critique:
 - **Truth (Wahrheitsanspruch):** The factual accuracy of a statement.
 - **Normative Rightness (Richtigkeitsanspruch):** The ethical or moral appropriateness of a statement.
 - **Sincerity (Wahrhaftigkeitsanspruch):** The genuineness or emotional honesty of a speaker.
- **Ideal speech situation (Ideale Sprechsituation):** A hypothetical condition in which communication is free from domination and all participants have equal opportunity to contribute.

1.10 Visual Coding Conventions

To enhance readability and distinguish key analytical elements, the following formatting conventions are applied throughout the dissertation:

- **Special expressions:** Italicized terms refer to game-specific mechanisms (e.g., *party time*, *earthquake*) or empirically identified communication patterns (e.g., *opinion clash*, *opinion duel*).
- **Game names:** Titles of games and prototypes are italicized—particularly the six **Urbanity** prototypes (*Clash*, *Rulebook Parliament*, *Indoor Parliament*, *Street Parliament*, *Tactic Dice*, and *Tactic Card*).

- **Communication steps:** Key phases in small-group interaction during gameplay are marked with step-based labels (e.g., **Step 1: Pairing Players** or **Final Step: Constructing with Consensus**).
- **Identified factors:** Variables influencing small-group communication (e.g., **Player Engagement** or **Player Audibility**), identified through iterative visual coding. These are categorized as (1) influential factors shaping interaction patterns, and (2) influential facilitation tasks affecting communicative flow. Factors present across all communication steps are marked as “influential factors through all steps,” while those emerging for the first time are flagged as **NEW!**
- **Cross-references (→ see):** This notation indicates links to identified design factors in the *Game Design Catalogue* and facilitation task factors informing the development of the *Facilitation Guide*.



Part II.

Literature Review

2

Serious Participatory Landscape Games for Small-Group Communication

This chapter defines and situates serious participatory landscape games within the broader context of participatory landscape governance and small-group communication. It begins by introducing the European Landscape Convention and its framework for public participation (Section 2.1), followed by an examination of how serious participatory landscape games have been applied as tools for communication and decision-making in participatory landscape processes (Section 2.2). It then draws on small-group communication theory to conceptualize how these games structure dialogue and facilitate interaction among participants (Section 2.3). Finally, it synthesizes insights from these strands to identify key research gaps that guide the empirical analysis in the following chapters (Section 2.4).

2.1 European Landscape Convention's Vision of Public Participation in Landscape Issues

This section introduces the European Landscape Convention as the first international treaty dedicated to the protection, management, and planning of all types of landscapes—natural, rural, urban, peri-urban, outstanding, ordinary, and even degraded—across Europe (Council of Europe, 2000a, Article 2–3). The Convention conceives of landscapes as socially constructed spaces shaped by collective values, everyday experiences, and individual perceptions (Council of Europe, 2000a, Article 5(a)). To realize this inclusive vision, it mandates public participation in landscape-related decision-making (Council of Europe, 2000a, Article 5(c)).

The section begins by examining how the Convention conceptualizes landscape through a constructivist lens (Section 2.1.1), followed by its emphasis on public participation as both a democratic right and a planning imperative (Section 2.1.2). It then reviews how participation is embedded across governance levels and policy stages (Section 2.1.3) and discusses the main challenges of implementing participatory governance (Sections 2.1.4). Finally, it introduces innovative participatory methods—such as games—as potential responses to these challenges (Section 2.1.5).

2.1.1 A Constructivist Perspective on Landscapes in the European Landscape Convention

To understand why the Convention places public participation at its core, it is necessary to examine how it defines landscape. Moving beyond scientific

perspectives that treat landscapes as purely physical and measurable entities, the Convention defines them as “an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors” (Council of Europe, 2000a, Article 1(a)). This definition frames landscapes as socio-cultural constructs shaped by environmental conditions and human perception—expressions of identity, well-being, and cultural meaning (Bruun, 2016; Butler, 2016; Council of Europe, 2017a, pp. 242–243; 2018a, pp. 59–61; Jones, 2007, pp. 619–620; Olwig, 2007, pp. 589–590).

Scholars have linked this understanding to Berger and Luckmann’s (1966) theory of socially constructed reality and to landscape scholarship such as Cosgrove (1984) and Kühne (2018b, 2019c)—discussed further in Section 3.3—which emphasize the co-creation of landscape meanings through shared experience and dialogue. In line with this interpretation, the Convention requires Member States to recognize the “particular values” people attribute to landscapes (Council of Europe, 2000a, Article 6(C)(1)(b)) and to consider their “aspirations” or how landscapes should evolve (Council of Europe, 2000a, Article 1(c)). It calls for formal “procedures for participation” (Council of Europe, 2000a, Article 5(c)) to ensure that protection, management, and planning reflect diverse perspectives—acting as a counterbalance to expert dominance in decision-making (Jones, 2016, p. 125) and signaling a broader shift toward democratic, participatory governance.

2.1.2 Human Rights and Participatory Traditions Underpinning the Convention’s Vision of Democratic Landscape Governance

Building on its constructivist understanding of landscapes, the European Landscape Convention foregrounds public participation as both a democratic right and a practical mechanism for democratic landscape governance (Council of Europe, 2017b, 2018a; Déjeant-Pons, 2011). As Prieur (2006, p. 24) notes, participation serves as a guiding “leitmotiv” of the Convention’s approach. Article 5(c) requires Member States to “establish procedures for the participation of the general public, local and regional authorities, and other parties with an interest in the definition and implementation of [...] landscape policies” (Council of Europe, 2000a).

The Convention’s strong emphasis on participation (Council of Europe, 2000a, Preamble) as a core principle of landscape governance reflects two broader currents. First, it aligns with the Council of Europe’s overarching mission to promote human rights, democracy, and the rule of law (Council of Europe, 1972, 2002; Prieur & Durosseau, 2006, p. 169). This normative foundation draws from key international legal instruments (Council of Europe, 2017a, p. 249)—including the Universal Declaration of Human Rights (UN General Assembly, 1948, December 10), the European Convention on Human Rights (Council of Europe, 1950), and the Aarhus Convention (UN Economic Commission for Europe, 1998, June 25)—which collectively affirm the public’s right to

access, participate in, and influence decisions affecting their environments and well-being. These frameworks reinforce the idea of participation as a democratic right rooted in environmental justice and procedural equity, rather than as a mere policy instrument.

Second, the Convention is deeply informed by mid-20th-century participatory planning traditions that challenged top-down, technocratic models of governance. These traditions—ranging from transactive and advocacy planning to collaborative and communicative approaches¹—emerged to empower marginalized voices and foster deliberative, dialogic processes in urban and regional development (Arnstein, 1969; Bond & Thompson-Fawcett, 2007, p. 451; Davidoff, 1965; Dewey, 1916, 1927; Forester, 1999, 2018; Friedmann, 1973; Healey, 1992, 1996, 1997, 1998; Innes, 1995, 1998; Innes & Booher, 1999a; Jacobs, 1961; Lane, 2005; Peattie, 1968; Taufiq et al., 2021). Drawing on these traditions, the Convention reimagines landscape governance as a participatory and socially embedded process—shaped by dialogue, negotiation, and local knowledge.

By combining these legal and planning traditions, the Convention positions participation not as a procedural formality but as a structural feature of landscape governance. It shifts away from technocratic, expert-led models toward more inclusive, bottom-up approaches that recognize the lived experiences, local knowledge, and aspirations of those who inhabit and shape landscapes (Arler, 2008, 2011; Arler & Mellqvist, 2015; Bartolomei et al., 2019; Butler & Calderon, 2016; Council of Europe, 2017b, 2018a, 2018b; Déjeant-Pons, 2011; Egoz, 2015; Egoz et al., 2018a, 2018b; IFLA Europe, 2014; Jones, 2011, 2016, 2018; Knudtzon, 2018; Luginbühl, 2017; Olwig, 2007; Reith et al., 2022; Szilágyi-Nagy, Passos, et al., 2022). In doing so, it ensures that landscape policies reflect the plurality of social, cultural, and ecological meanings attributed to landscapes by the people themselves (Butler, 2016; Council of Europe, 2008, II.2.3.A; Jones, 2007, pp. 619–620; Olwig, 2007, pp. 589–590).

2.1.3 Participation Across Policy Stages and Governance Levels

The European Landscape Convention promotes a participatory model of landscape governance that calls for public engagement along two key dimensions: (1) across all stages of the policy cycle and (2) at all levels of governance (Council of Europe, 2000a, Article 5(c); 2008, II.2; 2017b, 2018b; Luginbühl, 2017).

1 *Transactive planning* bridges the communication gap between designers and communities through direct interactions, emphasizing learning from the community with minimal reliance on data analysis (Friedmann, 1973; Taufiq et al., 2021). *Advocacy planning* empowers underrepresented groups, such as low-income and minority groups, facilitating their involvement in expressing their needs and perspectives (Davidoff, 1965; Peattie, 1968). *Communicative planning*, also known as *collaborative or deliberative planning*, focuses on sharing diverse views and collective problem-solving to foster inclusivity and consensus, valuing transformative learning and diverse opinions (Bond & Thompson-Fawcett, 2007, p. 451; Forester, 1999, 2018; Healey, 1992, 1996, 1997, 1998; Innes & Booher, 1999a).

Participation is not treated as a one-time consultation but is instead embedded throughout the process of developing landscape policies—strategic frameworks guiding the protection, management, and planning of landscapes (Council of Europe, 2000a, Article 1(b); 2000b, § 39; 2008, Appendix 2, § 3(6)(b)).

These policies apply to all types of landscapes—outstanding, ordinary, and degraded—ensuring that governance reflects both expert standards and the aspirations of local communities (Council of Europe, 2000a, Article 2; 2000b, § 41; 2008, I.4). The Convention identifies three core pillars of landscape policy—protection, management, and planning (see Table 2.1)—each requiring public input during its formulation and implementation.

Table 2.1 Three pillars of landscape policy. Table by the author.

Pillar	Definition	Reference
Landscape Protection	Safeguarding the significant natural and cultural features of landscapes.	(Council of Europe, 2000a, Article 1(d); 2000b, § 40; 2008, I.5).
Landscape Management	Accommodating evolving social, economic, and environmental dynamics.	(Council of Europe, 2000a, Article 1(e); 2000b, § 40; 2008, I.5).
Landscape Planning	Shaping landscapes for sustainable development aligned with community aspirations.	(Council of Europe, 2000a, Article 1(f); 2000b, § 40; 2008, I.5)

Public involvement is expected throughout the entire policymaking cycle, from initial assessment to monitoring (Council of Europe, 2000a, Articles 5(c), 6(C), and 6(D)). The Convention identifies four main stages of this process and encourages engagement from diverse actors—government agencies, local communities, NGOs, private entities, individuals, and representatives from economic, social, and cultural sectors (Jones, 2016, p. 123; Luginbühl, 2017, pp. 244–245). These stages are summarized in Table 2.2.

Table 2.2 Stages of participatory landscape policymaking. Table by the author.

Stage	Participatory focus	Reference
1. Identification, description, and assessment	Stakeholders and the public describe and evaluate landscapes based on their understanding of landscape character and values.	(Council of Europe, 2000a, Article 6(C); 2000b, § 54–58; 2008, II.2.1)
2. Defining landscape quality objectives	Communities and experts collaboratively define desired landscape outcomes reflecting shared values.	(Council of Europe, 2000a, Article 6(D); 2000b, § 59–60; 2008, II.2)
3. Implementation	Authorities, stakeholders, and the public apply agreed-upon protection, management, and planning measures.	(Council of Europe, 2000b, § 61; 2008, II.2)

Stage	Participatory focus	Reference
4. Monitoring and adaptation	Participatory review of outcomes and adjustment of landscape quality goals and policies.	(Council of Europe, 2000b, § 66–70; 2008, II.2)

In addition to covering all stages of policymaking, the Convention emphasizes multi-level governance, encouraging participation at the national, regional, and local levels. This occurs through both horizontal (within-level) and vertical (between-level) coordination (Council of Europe, 2000a, Article 5(c); 2008, II.2). Horizontal participation involves collaboration among actors operating at the same governance level, while vertical participation connects actors across levels to promote coherence and responsiveness in landscape policy. Examples are outlined in Table 2.3.

Table 2.3 Horizontal and vertical participation across governance levels. Table by the author.

Governance Level	Horizontal Participation	Vertical Participation
National	Ministries, national agencies, and NGOs collaborate on national landscape frameworks.	National bodies consult and coordinate with regional and local actors.
Regional	Regional authorities, agencies, and civil-society organizations work together on regional landscape strategies.	Regional actors implement national policies and engage local stakeholders.
Local	Local governments, community groups, and residents cooperate on neighborhood- and local-scale projects.	Local actors contribute insights to regional and national decision-making.

By embedding participation throughout both the policy cycle and governance structures, the Convention recognizes the importance of integrating multiple knowledge systems—expert, lay, institutional, and local—into decision-making (Council of Europe, 2008, II.2). Yet putting this model into practice remains difficult: slow-moving bureaucracies, limited cross-sector coordination, and conflicting public values often constrain the depth and effectiveness of engagement. The next section examines these challenges and their implications for the implementation of participatory landscape governance.

2.1.4 Limits and Possibilities of Implementing Participatory Landscape Governance

While the European Landscape Convention sets clear principles for participatory governance, its implementation reveals persistent challenges. Although not legally binding under international law, ratifying states undertake a legal commitment to embed its participatory vision across national, regional, and

local policymaking (Polakiewicz, 1999). The Convention grants wide flexibility in how participation is operationalized, reflecting the principle of subsidiarity and allowing adaptation to diverse legal, administrative, and cultural contexts (Council of Europe, 2000b, § 34). As stated in its guidance, “the means of participation should be chosen by each state from among methods appropriate to the different problems identified, taking account of current consultation and comparison customs” (Council of Europe, 2008, II.2.3.A).

This flexibility is evident in the Convention’s relatively few concrete recommendations—mainly concerning the early stages of landscape assessment and the definition of landscape quality objectives—and in its recognition that no single “universally acknowledged” method exists (Council of Europe, 2000b, § 58). (1) For assessment, it suggests combining technical approaches (e.g., research, surveys, GIS mapping) with participatory activities such as community surveys and public meetings, ensuring that local values, perceptions, and lived experiences are incorporated into expert-led evaluations (Council of Europe, 2000b, § 55–57). (2) For defining quality objectives, it recommends consultations with representative bodies, public inquiries, media outreach, and awareness campaigns (Council of Europe, 2000b, § 59). While useful, these largely conventional tools leave scope for more creative and dialogic approaches—especially as “an ordinary consultation, such as a public inquiry, is liable to be inadequate to identify the public’s expectations and needs with sufficient accuracy” (Prieur & Durousseau, 2006, p. 27).

Yet flexibility alone does not ensure that the Convention’s participatory ambitions are fulfilled. In many countries, implementation remains constrained by the structural limits of representative democracy and the dominance of expert-driven governance. Overcoming these barriers requires moving beyond conventional, expert-centered models toward more interactive, participatory, deliberative, and direct approaches (Council of Europe, 2018a, pp. 66–70) that engage communities and reflect the diversity of public values and expectations (Butler & Calderon, 2016, p. 61). Achieving this shift demands more than procedural adjustments; it calls for a deeper democratic transformation—one that the Convention’s guidance describes as “a collective democratic exercise whereby differences are accepted, common characteristics found, and operational compromises eventually reached” (Council of Europe, 2008, II.2.3.A).

Such transformation requires rethinking professional norms and institutional cultures. Landscape planners, civil servants, and policymakers—from pan-European institutions to local authorities—must move beyond technocratic routines and embrace inclusive, dialogic ways of working (Fiskevold, 2016, p. 82; Geelmuyden, 2016, p. 62; Jones, 2016; Olwig, 2007, p. 581). Citizens—long treated as passive consultees—are likewise called to take active, co-creative roles in shaping landscape futures (Larsson et al., 2011, p. 268).

This gap between ambition and practice highlights the need for participatory methods capable of surfacing and reconciling diverse—and sometimes conflicting—perceptions of landscapes. This raises a fundamental question: do current tools support the Convention’s social-constructivist understanding of landscapes

as spaces shaped by collective meaning-making, or do they continue to privilege expert perspectives that frame landscapes primarily as technical, visual, and objective realities (Butler, 2016, p. 249)? The next section examines how established and emerging participatory methods seek to navigate this tension.

2.1.5 Innovations in Participatory Methods

Addressing the tension between technocratic and socially embedded understandings of landscape requires participatory tools that not only collect input but also foster dialogue, imagination, and mutual learning. In addition to the methods explicitly mentioned in the European Landscape Convention, landscape governance increasingly draws on a broader repertoire of facilitation techniques developed in other fields—such as the Nominal Group Technique for structured idea generation, the Delphi Method for expert consensus-building, and the PERT Method for project planning—as well as focus groups, citizens' panels, consensus conferences, and citizens' juries (Arler, 2008, 2011; Arler & Mellqvist, 2015; Hirokawa et al., 1996, pp. 275–277; Jarboe, 1988, 1996; Jones & Stenseke, 2011a; Kaner, 1996; Saint & Lawson, 1994; Sunwolf & Seibold, 1999; Wates, 2000). These approaches have helped to address methodological gaps by providing structured ways to organize discussion and elicit perspectives.

Building on this foundation, the Convention's emphasis on early and inclusive participation has encouraged a wave of experimentation that extends far beyond its relatively modest recommendations for the identification, description, and assessment of landscapes (Council of Europe, 2000a, Article 6(C); 2000b, § 54–58; 2008, II.2.1) and for the definition of landscape quality objectives (Council of Europe, 2000a, Article 6(D); 2000b, § 59–60; 2008, II.2)—as summarized by Jones and Stenseke (2011a), Jørgensen et al. (2016) and Egoz et al. (2018a)—and detailed across successive guidance documents (Council of Europe, 2000a, 2000b, 2006, 2008, 2012, 2017a, 2017b, 2018a; Jones, 2007; Olwig, 2007; Prieur & Durousseau, 2006).

For landscape assessment, conventional expert-led analyses are increasingly combined with participatory techniques that surface local knowledge and values. Examples include the sense-of-place approach (Clemetsen et al., 2011, pp. 231–232), landscape character assessment (Swanwick, 2002) and the ECOVAST Guidelines (ECOVAST, 2006), alongside more creative and immersive methods such as participatory walks with mapping (Clemetsen & Schibbye, 2016, p. 99), landscape biographies (Baas et al., 2011; Kolen et al., 2016), poetic narratives (Geelmuyden, 2016), and image analysis (Fiskevold, 2016).

For defining landscape quality objectives, practice has evolved from basic preference surveys toward exploratory, future-oriented tools such as scenario building (Ramos, 2011, p. 202), often in combination with dialogue-based methods like focus group discussions, willingness-to-pay studies, and public opinion surveys (Michelin et al., 2011, p. 150), as well as large-scale quantitative surveys (Majchrowska, 2011) and qualitative methods such as semi-structured interviews (Larsson et al., 2011, p. 266; Ramos, 2011; Suškevičs & Kūlvik, 2011) and

dialogue-based techniques structured around landscape presentations (Michelin et al., 2011). These blended processes aim to balance breadth with depth and to create shared objectives informed by both expert and lay perspectives.

While these innovations significantly expand the Convention's original guidance, persistent challenges remain: integrating expert and lay knowledge, mediating conflicting perspectives, and ensuring inclusivity across diverse publics (Stenseke & Jones, 2011, pp. 302, 305–307). Many approaches are also resource-intensive and depend heavily on skilled facilitation (Nogué et al., 2010). This underscores the need for participatory methods that not only capture values but also structure communication and foster collaboration around those values.

One emerging response is the use of serious participatory landscape games—structured, rule-based formats designed to enable small groups to engage with landscape issues. Section 2.2 traces their evolution from leisure activities to tools that operationalize the participatory aims of the European Landscape Convention.

2.2 Aligning Serious Participatory Landscape Games with the Participation Vision of the European Landscape Convention

This section traces how serious participatory landscape games have evolved as participatory tools aligned with the European Landscape Convention's call for inclusive, democratic engagement. Since the 1960s, games have been increasingly used to support learning, collaboration, and decision-making in urban and regional planning, including landscape governance (Brković Dodig & Groat, 2021b; Devisch, 2008, p. 209; Kennedy, 1973, p. 332; Prilenska, 2020; Summers, 1979, p. 3; Szilágyi-Nagy & Brković Dodig, 2020). Within this broader field, serious participatory landscape games have emerged as structured, dialogue-driven tools for addressing complex landscape challenges.

The section begins with a historical overview of how games have shifted from leisure activities to serious engagement tools (Section 2.2.1), and then introduces a conceptual framework distinguishing play, games, playful design, and gameful design—situating serious participatory landscape games within this continuum (Section 2.2.2). Based on this framing, the research focuses on analog and hybrid face-to-face games designed to support structured small-group communication (Section 2.2.3). The section concludes by examining how these games operationalize the participatory goals of the European Landscape Convention across governance levels, thematic fields, and procedural stages (Section 2.2.4).

2.2.1 Serious Application of Play and Games in Landscape Governance

Serious participatory landscape games belong to a broader tradition in which play and games have been adapted for purposes beyond entertainment.

Understanding this lineage requires tracing how the concept of games has evolved from a leisure-only activity into a legitimate tool for structuring meaningful, real-world interaction.

In Western thought, play and games were long regarded as leisure activities distinct from the routines of everyday life (Abt, 1987; Avedon & Sutton-Smith, 1971; Caillois, 2001b; Costikyan, 1994; Crawford, 1982; Huizinga, 1949; Juul, 2005, Chapter 2; McGonigal, 2012, Chapter 1; Parlett, 1999; Salen & Zimmerman, 2004c, Chapter 7; Stenros, 2016; Suits, 2014). Huizinga (1949, p. 13) emphasized their separation from ordinary affairs, describing them as activities occurring within a distinct time and space governed by their own rules. Building on this, Salen and Zimmerman (2004c, p. 95) introduced the notion of the “magic circle”—the conceptual boundary distinguishing the game world from the real world. Within this framing, games were structured forms of play, often competitive, rule-governed, and goal-oriented.

From the mid-twentieth century onward, research in education, psychology, and sociology began to challenge this leisure-only framing by demonstrating that play serves serious purposes (Sutton-Smith, 1997, p. 175): supporting children’s cognitive and social development (Bruner et al., 1976; Fagen, 1976; Piaget, 1951; Vygotsky, 1967), fostering creativity and collective problem-solving (Bateson, 1956; Schwartzman, 1978; Spariosu, 1982, 1989), and motivating participation through intrinsic enjoyment (Bateson, 1956; Csíkszentmihályi, 1990; Garvey & Berndt, 1975, August 30–September 3).

Deepening this understanding, Deterding (2014) identifies six historical lineages that reveal how the boundaries between leisure and purposeful activity gradually converged:

- **Serious games:** Fully-fledged games created for education, training, or civic engagement—first used in military and corporate contexts, later adopted in urban and regional planning to explore complex scenarios (Abt, 1987; Brković Dodig & Groat, 2021b; Duke, 1974; Feldt, 2014; Parlett, 1999, pp. 167–178; Walz & Deterding, 2014b, pp. 26–32).
- **Workplace games:** Playful methods for improving collaboration, productivity, or innovation in organizational settings (Coonradt, 1985; Csíkszentmihályi, 1990, 2000; Gray et al., 2010; Lundin et al., 2000; Nelson, 2012).
- **Play as counterculture:** Artistic and activist uses of play to critique or reimagine social structures (Andreotti, 2000; Debord, 1958; Deterding, 2014; Flanagan, 2009; Fluegelman & Tembeck, 1991; Pearce et al., 2007; Turner, 1982; Wark, 2011).
- **Playful design:** Embedding elements such as humor, surprise, or exploration into everyday products and processes (Arrasvuori et al., 2011, Jun 22–25; Costello & Edmonds, 2007; Hassenzahl, 2010; Hassenzahl et al., 2008).
- **Pervasive games:** Extending play into physical spaces and daily routines through technology (Benford, 2007; Benford & Giannachi, 2011; de

Souza e Silva & Hjorth, 2009; Krotoski, 2008, June 13; Magerkurth et al., 2005; McGonigal, 2006; Montola, 2009; Montola et al., 2009; Raasted, 2012; Stenros & Montola, 2010).

- **Gamification:** Applying selected game elements—such as points, challenges, and feedback loops—to non-game contexts, from health to civic engagement (Aymard & Stacey, 2014; Davis, 2007; Deterding et al., 2011; Frith, 2013; Khiri, 2014; McGonigal, 2009, 2010; Mollick & Edery, 2008; Reeves & Read, 2009; Schnell, 2010, February 17–19; Wilken, 2015; Zichermann, 2010; Zichermann & Cunningham, 2011).

The digital revolution introduced yet another shift: it accelerated and diversified these developments, further eroding the boundary of the magic circle and blurring distinctions between everyday life and play (Bogost, 2007; Bruns, 2008; Deterding, 2014; Jenkins, 2006; Juul, 2005; McGonigal, 2012; Montola, 2009; Salen & Zimmerman, 2004c; Zagal & Deterding, 2018). Alternate reality games merged fictional narratives with real-world locations and events, sending players into streets, workplaces, and online spaces to solve challenges. Urban play festivals transformed public spaces into collective playgrounds involving unsuspecting bystanders. E-sports professionalized competitive gaming, creating careers and economies around what was once seen as leisure. Virtual economies allowed in-game actions to generate real financial value, sometimes provoking legal and political debate.

These developments exemplify how the spatial, temporal, social, and economic boundaries once associated with games have been breached (Deterding, 2014; Dibbell, 2008; Juul, 2005; Malaby, 2007, 2012; McGonigal, 2012, p. 21; Montola, 2009, p. 12; Pargman & Jakobsson, 2008; Poremba, 2007; Salen & Zimmerman, 2004c, p. 95; Stenros, 2016; Stenros et al., 2007; Walz & Deterding, 2014a). Play can involve non-players, produce tangible real-world impacts, and lack the clear play signals that once distinguished it from other social interactions (Apter, 1991; Bateson, 1977, pp. 68–69; Fine, 1983; Goffman, 1974, pp. 21–22; Montola, 2009, pp. 12–14; Salen & Zimmerman, 2004a). As these boundaries erode, Juul (2005, p. 41) describes the resulting condition as one of “negotiable consequences”—where the outcomes of play and games increasingly extend into real-world personal, professional, and political domains.

For participatory landscape governance, these developments show that play, games, and the serious practice of participation can intertwine in multiple ways—through (1) playified and (2) gamified participation, as well as through (3) toys and (4) games designed to structure small-group problem-solving and decision-making about landscape issues (Deterding, 2014, p. 23). The next section explains this diversity and situates serious participatory landscape games within this expanded field by clarifying how they differ from other serious applications of play.

2.2.2 Defining Serious Participatory Landscape Games

As the boundaries between play and real-world activity have blurred, the term game now encompasses a wide spectrum of practices—from fully fledged games to gamified experiences that incorporate only selected game-like elements. For participatory landscape governance, this conceptual diversity poses a challenge: not all games are designed to structure deliberation or decision-making, and not all playful processes qualify as games. A clear framework is therefore needed to locate serious participatory landscape games within this expanded field.

Earlier models—such as Caillois's (2001a) continuum from *paidia* (open-ended, free play) to *ludus* (rule-bound, structured play), or Salen and Zimmerman's (2004c, pp. 72–73) framing of games as formal systems governed by explicit rules and goals—were useful for distinguishing leisure-oriented forms of play. However, they do not fully account for contemporary design approaches that selectively integrate elements of play or game into participatory processes.

Deterding's (2014, p. 23) “gameful world” framework addresses this limitation by mapping serious applications of play and games along two axes:

- **From *paidia* to *ludus*:** Distinguishing open-ended play from structured play (Caillois, 2001a).
- **From partial to full implementation:** Distinguishing between the use of individual game/play elements and the design of complete games or toys (Walz & Deterding, 2014a).

This produces four quadrants. These include (1) serious games, fully fledged games created for serious purposes; (2) serious toys, complete toys designed for open-ended play with serious intent; (3) gameful design, which applies selected game mechanics such as scores and feedback systems in non-game contexts; and (4) playful design, which incorporates playful qualities such as humor, curiosity, or exploration into non-play settings.

Building on this framework, Szilágyi-Nagy (2022) adapted it into the *Play/Game Compass* to visualize how different participatory tools—from playful facilitation techniques to complete simulation games—align with these categories in landscape governance (Fig. 2.1).

Within this compass, serious participatory landscape games occupy the quadrant of *ludus*-oriented, fully-fledged designs created for serious purposes. They are structured, rule-based games in which gameplay itself constitutes the participatory process. Rather than merely enhancing an existing meeting or workshop, they provide a coherent game system—with defined roles, objectives, and progression—that frames landscape issues, focuses attention, and channels interaction of small groups toward collaborative problem-solving and decision-making.

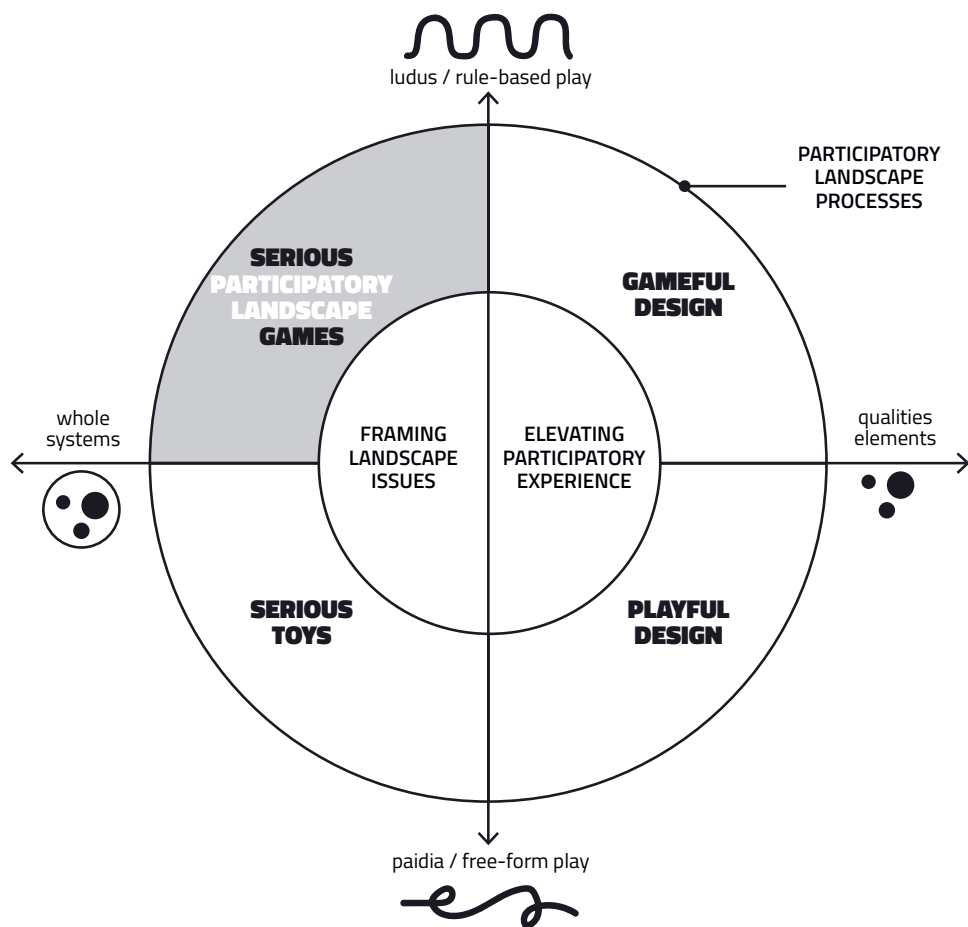


Fig. 2.1 Play/Game Compass. Graphic by the author, adapted from Szilágyi-Nagy (2022, p. 406). This distinction separates serious participatory landscape games from the following:

This distinction separates serious participatory landscape games from the following:

- **Approaches in the “elevating participatory experience” half of the Play/Game Compass:** Such as gameful and playful design of participatory processes, which enhance existing meetings or workshops by adding play or game elements. Serious participatory landscape games, by contrast, belong to the “framing landscape issues” half, where the game itself is the participatory process.²

² In the Play/Game Compass, “framing half” corresponds to what (Deterding, 2014, p. 23) and Walz and Deterding (2014b, p. 7) call the “cultivation of *ludus*”—the intentional design and deployment of structured, rulebased play to frame, model, or solve real-world issues. By contrast, the “elevating half,” by contrast, reflects the “ludification of culture”—embedding playful or game-like thinking into everyday contexts to enhance existing activities (Montola et al., 2009; Raessens, 2006, 2012; Sicart, 2014; Stenros et al., 2007; Walz & Deterding, 2014b, p. 7).

- **Gameful design of participatory processes:** This approach borrows only selected game elements (e.g., points, feedback systems, challenges) to structure activities and encourage extrinsic motivation (Hunicke et al., 2004). Examples include gamified platforms and workshops (Gordon & Schirra, 2012; Lerner, 2014; Poplin, 2012, 2014; Thiel & Lehner, 2015). Serious participatory landscape games are instead fully fledged games with defined roles, rules, and progression that constitute the entire framework for engagement.
- **Serious toys:** These are also complete experiences but enable hands-on exploration without the rule-bound progression or goal orientation of a serious game. Examples include physical or digital models, kits, or artifacts that facilitate tactile exploration of landscape issues (Becu et al., 2001; Bedř, 2019; Bereitschaft, 2016; Boer et al., 2010; Devisch, 2008; Fullerton, 2019; Gordon & Koo, 2008; Jekel et al., 2017; Sikora Wells Appel, 2015; Squire, 2008; Stokes et al., 2018; Westerberg & von Heland, 2015). While serious toys can support spatial thinking and engagement, they do not structure communication or decision-making. In serious participatory landscape games, the structured gameplay itself organizes interaction, making it both the medium and the method of participation.

By clarifying this position, the Play/Game Compass focuses this research on fully fledged games that encourage participation within rule-based, *ludus*-oriented environments. To distinguish this category from serious games developed for other domains—such as military training or healthcare—this study uses the term serious participatory landscape games, emphasizing their role in participatory landscape governance and their alignment with the aims of the European Landscape Convention.

The next section illustrates how diverse these games can be—even within this specific quadrant—by examining a range of analog and hybrid examples designed for face-to-face engagement.

2.2.3 Exploring the Diversity and Defining the Scope of Serious Participatory Landscape Games

Building on the previous section—which positioned serious participatory landscape games within the Play/Game Compass (Szilágyi-Nagy, 2022) as structured tools for engaging small groups with landscape-related challenges in line with the European Landscape Convention's aim to promote inclusive public participation (Council of Europe, 2000a, Article 5(c))—this section examines the diversity found within that quadrant and defines the specific scope adopted for the present research.

Serious Participatory Landscape Games encompass a wide variety of formats, from analog board games to computer-aided simulations, and from solo exercises to collaborative multiplayer settings (Abt, 1987; Ampatzidou & Gugerell, 2018; Barreteau et al., 2001; Boal, 1979; Brandt et al., 2022, January 13; Brković Dodig

& Groat, 2021a; Déa, 2012; Devisch, 2008; Feldt, 2014; Freire, 1968; Gordon & Roo, 2008; Gugerell et al., 2018; Jekel et al., 2017; Kaprielian, 2018; Lankford et al., 2004; Lerner, 2014; Mayer, 2009; Poplin, 2012, 2014; Reith et al., 2019; Sanoff, 1979; Thiel, 2016; Westerberg & von Heland, 2015). Their mechanisms vary—competition, role-play, chance, or sensory immersion—but all share a foundation in structured, rule-bound design (Szilágyi-Nagy, 2022, p. 405).

Analog and hybrid formats trace their roots to 1960s simulation gaming and serious games—initially developed for military training and corporate strategy, and later applied to urban and regional planning (Abt, 1987; Devisch, 2008, p. 209; Duke, 2011; Feldt, 2014; Kennedy, 1973, p. 332; Summers, 1979, p. 3; Taylor, 1971). Designed for laypeople, students, and professionals alike (Abt, 1987; Duke, 1974, p. 78; Sanoff, 1979, p. 7), these games used visual tools, role-play, and scenarios to simplify complex landscape problems (Kalish, 1973, p. 689; Meier et al., 1964, p. 67). They created low-risk environments for experimentation, negotiation, and shared understanding (Abt, 1987, pp. 13, 28; Duke, 1974; Duke & Kriz, 2014; Sanoff, 1979, p. iii). Initially, such games took the form of analog, board game-based simulations or early computer-assisted models (Duke, 1964; Feldt, 1972)).

Over time, this tradition diversified into distinct genres—policy games (Duke & Geurts, 2003b), design games (Sanoff, 1979), co-design games (Brković Dodig & Groat, 2021b), generative city gaming (Tan, 2014), and deliberative games (Gordon et al., 2017; Johnson et al., 2017; Tóth & Szilágyi-Nagy, 2021)—yet all retained a common logic: engaging multiple actors to address complex landscape issues involving competing strategies, long-term implications, and uncertain outcomes (Duke, 1974, pp. 10–11; Duke & Geurts, 2003b, p. 49).

The present research focuses specifically on analog and hybrid games that convene participants—typically 3–20 people—in a shared physical setting, explicitly designed to foster face-to-face verbal and nonverbal interaction for collaborative decision-making, deliberation, or problem-solving on landscape issues. Examples include *Mobility Safari* (Gugerell et al., 2018), a tabletop format for exploring urban mobility challenges; *M.E.T.R.O.* (Duke, 1966), which combines real-time computer simulations with in-person workshops; and *Redesire* (Ashtari & de Lange, 2019), which integrates digital facilitation tools—such as tablets that track speaking turns—into physical discussions.

Excluded from the scope are fully digital or screen-dominated formats—such as *Participatory Chinatown* (Gordon & Schirra, 2012; Ruggeri & Szilágyi-Nagy, 2019; Schirra, 2013) and *Minecraft*-based planning activities (Westerberg & Rana, 2016; Westerberg & von Heland, 2015)—where face-to-face interaction is secondary. Also excluded are remote or online workshops (Reith et al., 2021) and improvisational, theatrical, or unstructured performative methods such as *Theatre of the Oppressed* (Boal, 1979; Déa, 2012; Freire, 1968; Lerner, 2014; Reith et al., 2019), which lack the procedural structure characteristic of a game. Hybrid formats like *@stake* and *Redesire* (Ashtari & de Lange, 2019; Gordon et al., 2016) remain within scope when they preserve in-person interaction while augmenting facilitation digitally.

With this scope defined, the next chapter examines how such analog and hybrid serious participatory landscape games align with the European Landscape Convention's participatory vision across governance levels, thematic areas, and policy stages.

2.2.4 Aligning Serious Participatory Landscape Games with the European Landscape Convention

This section explores how analog and computer-aided serious participatory landscape games—designed to facilitate face-to-face, small-group communication about landscape issues—align with the participation principles outlined in the European Landscape Convention. Building on Section 2.1.3, which detailed the Convention's participatory framework, the analysis is structured around three key dimensions: (1) fields of landscape policy (protection, management, and planning); (2) governance levels (from local to transboundary); and (3) procedural stages (from identification to monitoring). By examining game examples across these dimensions, this section demonstrates that such games are not only diverse in form and application but also conceptually aligned with the Convention's participatory vision.

1. **Fields of landscape policy (protection, management, and planning):** Serious participatory landscape games reflect the Convention's tripartite focus on protection, management, and planning (Council of Europe, 2000a, Article 1(d–f)). Their thematic flexibility allows them to address a wide range of issues—from urban development (e.g., *Play Almere Haven* by Tan, 2014) and sustainable mobility (e.g., *Mobility Safari* by Gugerell et al., 2018), to water governance (e.g., *River Basin Game* by Lankford et al., 2004, or *Aqua Republica* by Medema, Furber, Adamowski, Zhou, & Mayer, 2016), and heritage protection (e.g., *Fort Ross Virtual Warehouse* by Lercari, Forte, Onsurez, & Schultz, 2013, or *DANUrBanity* by KÉR, 2019). These games engage participants across all types of landscapes—urban, rural, and peri-urban—as emphasized in Article 2 of the Convention (Council of Europe, 2000a).
2. **Governance levels (local, regional, national, and beyond):** Serious participatory landscape games are employed across multiple governance levels, aligning with the European Landscape Convention's principles of horizontal and vertical coordination (Council of Europe, 2000a, Article 5(c); 2008, II.2). At the local level, they are used in community workshops—for instance, in school design (Hofmann, 2018, 2019a, 2019b; Sanoff, 1979, p. 1; 2000, p. 75) and participatory urban planning (Szilágyi-Nagy & Tóth, 2017; Tóth & Poplin, 2014, June 3–6). At regional and national scales, games support dialogue in land-use simulations (Abt, 1987, pp. 91–94) and contribute to policymaking in national and international forums (Ampatzidou & Gugerell, 2018; Duke & Geurts, 2003b; Eisenack, 2013; Feldt, 2014; Feldt et al., 1972; Kaprielian, 2018). These formats are tailored to diverse audiences,

bringing together citizens of different ages, community actors, experts, and public officials in structured communication settings that foster mutual understanding and collective action (Abt, 1987; Duke & Geurts, 2003b; Hofmann, 2019a, 2019b; Reith et al., 2019; Sanoff, 1979). Some games are explicitly designed to engage intergenerational and multi-background groups (Építészforum, 2021, May 3; kultúrAktív Egyesület, 2015, August 28).

3. **Procedural stages (from identification to monitoring):** These games can be embedded throughout the policy process as described in the Convention (Council of Europe, 2000a, Article 5(c), 6(C), and 6(D); 2008; Szilágyi-Nagy & Brković Dodig, 2020). Some focus on early phases such as landscape identification, assessment, and value-mapping (e.g. *#playhellocity* by Szilágyi-Nagy, Fadeeva, Asanovich, & Stepanenko, 2024; *DANUrBanity* by KÉK, 2019; *Community Conversational* by Johnson et al., 2017; *Silver-Bridge* Borsos & Szilágyi-Nagy, 2024; Szilágyi-Nagy, Borsos, Sebestyén, de Tricaud, & Szentkirályi, 2022). These games often facilitate structured dialogue aimed at surfacing values, reconciling viewpoints, and co-defining shared objectives (Feldt, 2014, p. 285; Gordon et al., 2016; Mochizuki et al., 2018; Tóth & Szilágyi-Nagy, 2021). Others extend into later stages by supporting the development of interventions, simulation of trade-offs (de Castro & Sobral, 2021; Kaprielian, 2018), or collective evaluation of outcomes. While the monitoring stage is less frequently addressed directly, some games integrate reflective or post-occupancy elements that support feedback and learning (Brković Dodig & Chiles, 2019). Often, multiple procedural stages are bundled within a single gameplay experience.

Ultimately, serious participatory landscape games represent a practical mechanism for operationalizing the European Landscape Convention's participatory ideals. They offer inclusive and context-sensitive formats that cut across fields, levels, and stages of landscape governance—facilitating horizontal dialogue and vertical integration through structured, rule-based interaction (Council of Europe, 2000a, Article 5(c)).

Yet while their application clearly aligns with the Convention's vision, a key theoretical question remains: why do these games work in practice? Understanding their effectiveness requires connecting the Convention's underlying vision—of landscapes as shared perceptions and collective democratic exercises in finding common ground—with broader theoretical perspectives that explain how such participatory processes unfold.

The next section continues to build this theoretical bridge by focusing on the communication processes within these games, drawing on communication scholarship to better understand their underlying dynamics and to define the unit of analysis for the subsequent research.

2.3 Small-Group Communication in Serious Participatory Landscape Games

This section turns attention to the unit of analysis of this research: the communication processes unfolding within serious participatory landscape games—how players interact, exchange ideas, and jointly address landscape-related challenges. It interprets this form of communication through the lens of small-group communication theory, providing a framework for understanding how structured, game-facilitated interaction enables collaboration, negotiation, and shared decision-making among participants.

It begins by defining small-group communication and comparing its core characteristics with the dynamics of in-game interaction (Section 2.3.1). It then frames gameplay groups as task-oriented groups whose purpose is to solve a shared problem—in this case, a landscape challenge—and to reach collective decisions (Section 2.3.2). The following part examines how both conventional facilitation methods and game design structure and stimulate this problem-solving process (Section 2.3.3). Finally, it reviews existing scholarship on communication within games, identifying the main insights and remaining gaps that this research seeks to address (Section 2.3.4).

2.3.1 Defining Small-Group Communication in Serious Participatory Landscape Games

In Section 2.2, the focus narrowed to a specific subset of serious participatory landscape games—analogue and hybrid formats designed for face-to-face interaction in small groups of 3 to 20 participants. These include gaming/simulation (Duke, 1964), policy games (Duke & Geurts, 2003b), design games (Sanoff, 1979), co-design games (Brković Dodig & Groat, 2021b), generative city gaming (Tan, 2014), and deliberative games (Gordon et al., 2017; Johnson et al., 2017; Tóth & Szilágyi-Nagy, 2021). All are structured to bring participants together in shared physical settings—around tables, boards, and tangible tools—to collaboratively explore and address landscape-related challenges. Their design deliberately supports direct verbal and nonverbal interaction, inviting structured dialogue, deliberation, and negotiation through gameplay.

The communicative potential of such settings was first articulated by Duke (1974, pp. xvi–xvii), who conceptualized gaming/simulation as an intentionally designed communication environment for small-group interaction. Duke (1964, p. 78) wrote that “the prime purpose of gaming/simulation is to establish dialogue to increase communication among a group about a topic which is complex, future-oriented, of a systems nature, and which requires a vocabulary or vernacular which is not commonly shared by the group at the outset of the discussion”—whether between experts and lay groups, or among lay participants themselves. He observed that players often self-organize into rich, parallel conversations in which multiple lines of inquiry unfold simultaneously about the same issue—“multilogues,” as he called them—enabled by the game (Duke,

1974, p. 23). While Duke developed this insight in relation to simulation games (gaming/simulations and policy games), here I extend the connection to the broader set of game types within my research focus, as they appear to create similar conditions for small-group communication.

Small-group communication is a foundational concept within communication studies, focusing on how individuals interact, co-create meaning, and influence one another in groups small enough to sustain direct, face-to-face engagement (Beebe & Masterson, 2016; Ellis & Fisher, 1994; Frey et al., 1999; Hirokawa et al., 2003; Pavitt & Curtis, 1998; Shaw, 1981a). Small-group communication, as defined by Beebe and Masterson (2016, p. 2), is “communication among a small group of people who share a common purpose, who feel a sense of belonging to the group, and who exert influence on one another.” It is a dynamic, transactional process in which participants co-construct meaning through simultaneous verbal and nonverbal interaction. Such groups typically have between 3 and 20 members—beyond this threshold, direct interaction tends to weaken. They are aligned by a shared task or outcome; members identify themselves as part of the group and continuously influence one another’s perspectives and actions.

These criteria map closely onto the structure and player experience of serious participatory landscape games. They convene participants in shared physical spaces, embed collective goals in the game’s objectives, and link these goals to complex challenges of landscape planning, protection, or management. Gameplay fosters a sense of group identity by framing participants as collaborators in a shared task. Within these sessions, participants inevitably influence one another’s perspectives and behaviors as they exchange ideas, negotiate trade-offs, and adapt strategies. This capacity to generate mutual influence and shared meaning directly reflects the European Landscape Convention’s aim of fostering dialogue, identifying common ground, and negotiating compromises among diverse actors. In this sense, the communication that unfolds within serious participatory landscape games can be understood as a form of small-group communication.

2.3.2 Players as Task-Oriented Groups in Serious Participatory Landscape Games

Having established that communication in serious participatory landscape games fits the definition of small-group communication, we can now consider the purpose that drives this interaction. As discussed in Section 2.2, these games are designed for a serious purpose: players are not gathered for open-ended conversation but to collaboratively address complex, real-world challenges of landscape protection, management, or planning. This situates them within what communication studies describe as task-oriented (or secondary) groups—groups formed to achieve a specific, externally defined goal (Beebe & Masterson, 2016, p. 12). This contrasts with primary groups, such as families or circles of friends, which exist mainly for relational or social purposes.

Framing serious participatory landscape games as task-oriented groups is significant for two reasons. First, it emphasizes that player groups operate within a focused, goal-driven structure. Second, it connects these games to a well-established body of small-group communication research on problem-solving and decision-making—both considered core functions of such groups (Gouran & Hirokawa, 1996, 2003; Hackman, 1968; Jarboe, 1988; Larson, 1969; Littlepage et al., 1995; Maier & Thurber, 1969; Van de Ven & Delbecq, 1971; VanGundy, 1981; Zhu et al., 2020).

Problem-solving aims to overcome barriers or address undesirable situations (Beebe & Masterson, 2016, pp. 151–162). It is typically process-oriented, unfolding through sequential stages such as Dewey’s (1910) reflective thinking model, which divides the process into five logical steps: problem identification, analysis, solution generation, evaluation, and implementation (see Table 2.4). Many serious participatory landscape games mirror this progression through structured rounds or phases that guide players step by step toward resolution—for example, in Abt’s (1987), Duke’s (1966), or Tan’s (2017) games.

Table 2.4 Problem-solving methods of small groups. Table by the author, based on Beebe and Masterson (2016, pp. 164–178).

Reflective Thinking Step (Dewey, 1910)	Example Methods
1. Identify & define the problem	Is/Is-Not Analysis; Journalist’s Six Questions; Pareto Charts; SWOT Analysis
2. Analyze the problem	Force-Field Analysis; Cause-and-Effect Diagram; PROMOD Technique; Establishing Criteria
3. Generate possible solutions	Brainstorming Methods
4. Evaluate & select solutions	T-Charts (Pros & Cons); Average Rankings & Ratings
5. Test & implement solutions	Prototyping; PERT Diagram; Action Chart; Flow Chart

Decision-making, while often embedded within problem-solving, is a distinct process focused on selecting a preferred option from among alternatives (Beebe & Masterson, 2016, pp. 147–151). Serious participatory landscape games employ a variety of decision-making methods documented in small-group research, including voting, consensus-building, and expert determination. Examples include Sanoff’s (1979) design games, where consensus emerges through individual priority rankings followed by group discussion; Abt’s (1987) role-play simulations, where stakeholder groups define priorities for expert review; and Johnson et al.’s (2017) deliberative games, where structured dialogue facilitates agreement.

Viewing serious participatory landscape games through this task-oriented lens reinforces their role as communication tools: they structure and coordinate interaction to achieve collective problem-solving and decision-making. This makes them well suited to addressing the European Landscape Convention’s

call for inclusive, negotiated outcomes in landscape governance. Understanding whether a game's primary purpose is to generate options or to reach a decision is crucial for effective game design.

2.3.3 Structure and Interaction: The Foundations of Effective Small-Group Communication

As established in Sections 2.3.1 and 2.3.2, serious participatory landscape games bring together small, task-oriented groups to address complex issues of landscape protection, management, and planning. Such groups typically pursue two interrelated purposes: problem-solving and decision-making.

In traditional facilitation, each purpose is supported by a repertoire of recognized methods (Gouran & Hirokawa, 2003; Hirokawa, 1985; Hirokawa et al., 1996; Jarboe, 1996; Poole, 1983, 2003; Sunwolf & Seibold, 1999; VanGundy, 1981). For problemsolving, the stages of Dewey's (1910) reflective thinking model—introduced in Table 2.4—can be matched with specific techniques such as SWOT analysis for problem identification, force-field analysis for problem analysis, brainstorming for generating solutions, and prototyping for implementation (Beebe & Masterson, 2016, pp. 164–178).

Decisionmaking likewise draws on an established set of methods (see

Table 2.5), including consensus building, majority voting, supermajorities, expert determination, and ranking systems (Beebe & Masterson, 2016, pp. 149–150).

Table 2.5 Decision-making methods of small groups. Table by the author, based on Beebe and Masterson (2016, pp. 149–150).

Method	Description	Typical Use
Decision by Expert (Internal)	Most knowledgeable group member decides	When one member has clear expertise
Decision by Expert (External)	Outside authority or consultant decides	When specialized external input is needed
Average of Individual Rankings	Members rank options individually; highest average wins	Balances diverse opinions
Random Choice	Low-stakes decision made randomly (e.g., coin toss)	To break deadlocks or decide trivial matters
Majority Rule	Option with most votes is chosen	Standard in democratic settings
Decision by Minority	Small subgroup decides	Works if subgroup has expertise or no major opposition
Consensus	All members support the final choice (emphasizing agreement, eliminating or combining alternatives)	When full buy-in is crucial

Method	Description	Typical Use
Supermajority	Two-thirds or more must agree	Common in formal or high-stakes settings

According to Beebe and Masterson (2016, p. 166), the effectiveness of these problem-solving and decision-making methods lies in their ability to balance two foundational elements of small-group communication:

- **Structure:** The formalized components of group work—rules, agendas, or phased procedures—that guide participants logically and systematically toward a shared objective.
- **Interaction:** The spontaneous, real-time verbal and nonverbal exchanges among group members—discussions, negotiations, gestures, posture, and eye contact—that enable collective sense-making, conflict resolution, and consensus building.

In traditional workshops, structure is provided by an agenda or facilitator, while interaction unfolds within that framework. In serious participatory landscape games, these two elements are embedded directly into the game system. Rules, sequential phases, scenario materials, and feedback mechanisms act as a “silent facilitator,” guiding the process without constant intervention. Many games also include a game master or facilitator who manages pacing, clarifies rules, and supports participants’ needs (Baalsrud Hauge et al., 2021; Duke, 1964, pp. 106–108). This combination of built-in structure and active facilitation creates a uniquely supportive communication environment.

Existing examples illustrate a range of strategies for structuring and stimulating interaction:

- **Structure strategies:** *Corridor* (Abt, 1987, pp. 91–94) and *Passive Energy Strategy Selection* (Sanoff, 1979, p. 94) guide players through procedural phases resembling workshop agendas. Scenario cards, phased rounds, and structured feedback loops keep the group aligned with the task, scaffold decision processes, and ensure logical progression from problem identification to resolution.
- **Interaction strategies:** Games such as *Urbanity* (Szilágyi-Nagy & Tóth, 2017) and *Community Conversational* (Johnson et al., 2017) use prompt cards and visual tools to spark discussion and encourage participation. Hybrid games such as *Redesire* (Ashtari & de Lange, 2019) and *@stake* (Gordon et al., 2016) combine analog and digital features to support inclusive exchanges. Interaction in these games is often multimodal—verbal negotiation and persuasion are complemented by artefact-mediated actions such as moving tokens, arranging visual elements, or gesturing toward shared boards and maps.

In sum, serious participatory landscape games merge the procedural clarity of traditional facilitation with the immersive, artefact-rich interaction of gameplay. By embedding both structure and interaction into their mechanics and

facilitation roles, they create a dynamic process of shared meaning-making that aligns closely with the European Landscape Convention's aims for inclusive participation. The next section turns to existing studies of communication in games, tracing how scholars have analyzed structure–interaction dynamics and where further investigation is needed.

2.3.4 Structure and Interaction in Serious Participatory Landscape Games

Existing literature offers several perspectives on how serious participatory landscape games shape communication through structure and interaction.

Some studies have sought to understand the interaction patterns that games generate. Duke (1974; Duke & Geurts, 2003a, 2003b) was among the first to describe the communicative dynamics and interaction patterns of games. He observed that his games produced a distinctive interaction pattern—the multilogue: multiple, parallel conversations evolving around a shared challenge, in contrast to the linear, turn-based dialogue typical of question-and-answer sessions (Duke, 1974, p. 23). To better understand this phenomenon, he visualized the pattern to illustrate how communication flows among participants, offering synthesized yet insightful representations of how interaction operates within gameplay. However, this visualization captures only isolated moments rather than the temporal evolution of interaction or the spatial configuration of game spaces—factors identified as highly influential on small-group communication by Hall (1966), Shaw (1981b), and Sommer (1969).

Fullerton (2019, pp. 59–64) approached interaction patterns differently by classifying games according to the structural relationships among players—cooperative, competitive, or hybrid—which influence whether participants align around shared goals or fragment into factions. Her taxonomy distinguishes cooperative play, team competition, multilateral competition, and player-versus-game formats, each fostering distinct modes of interaction. These relationship types frequently appear in serious participatory landscape games, where cooperation and competition combine with interaction modes such as (1) negotiation, (2) consensus-building, or (3) deliberation to produce specific gameplay dynamics. The following examples illustrate how these combinations emerge in different game types:

- **Competitive negotiation**, exemplified by *Corridor* (Abt, 1987, pp. 91–94), where players assume stakeholder roles, build coalitions, and lobby for influence in regional transport planning through scenario-based bargaining tasks, unscripted negotiation rounds, and performance-linked rewards.
- **Collaborative consensus-building**, as in *Passive Energy Strategy Selection* (Sanoff, 1979, p. 94), which alternates between solo and group deliberation rounds under consensus rules, using tangible tools to visualize priorities until diverse viewpoints converge on shared energy-efficiency goals (Sanoff, 1979, p. 2; 2000, p. 77).

- **Deliberative discussion**, found in *Redesire* (Ashtari & de Lange, 2019), *@stake* (Gordon et al., 2016), *Community Conversational* (Johnson et al., 2017) and *Urbanity* (Szilágyi-Nagy & Tóth, 2017; Tóth & Szilágyi-Nagy, 2021), which use structured prompts, voting, and facilitation to support pluralistic debate.

Other scholars have examined design aspects influencing communication. McGonigal (2010, 2012) argues that “mechanics”—the actions, behaviors, and control mechanisms available to players (Hunicke et al., 2004, p. 3; Lo et al., 2021, p. 6)—can foster motivation, trust, and social connection, all essential for small-group collaboration. Clear objectives, role assignments, and feedback loops can structure verbal and non-verbal exchanges, creating dynamic environments for collective problem-solving around complex, real-world challenges (McGonigal, 2012). Lerner (2014) complements this view by identifying four functional categories that shape interaction: (1) conflict and collaboration mechanics (e.g., role-play, balancing feedback loops) that create structured settings for negotiation and teamwork; (2) rules-based mechanics (e.g., just-in-time information, modeling) that determine when and how participants interact; (3) outcome mechanics (e.g., points, clear goals, uncertainty) that focus attention and guide decision-making; (4) and engagement mechanics (e.g., visuals, narratives, choice points) that enhance motivation and participation.

Taken together, these studies reveal two key shortcomings that shape the direction of this research. First, there is a knowledge gap: while prior works describe what small-group interaction looks like (Duke, 1974; Fullerton, 2019) and how game design can shape it (Lerner, 2014; McGonigal, 2012), no existing research integrates these perspectives to explain how design, structure, and interaction dynamically co-evolve during gameplay. Second, there is a methodological gap: current visual or analytical frameworks cannot yet represent how games structure communication, how interaction unfolds over time, or how it is shaped by the spatial and procedural context of play.

Addressing these gaps provides the conceptual foundation for the methodological framework developed in the next chapter.

2.4 Conclusion and Research Gaps Emerging from the Literature

This chapter has traced three interconnected strands that frame the present research.

First, Section 2.1 examined the European Landscape Convention’s participatory vision, which reconceptualizes landscapes as socially constructed spaces shaped by people’s perceptions and values. It positions public participation as a structural principle of landscape policy—guiding the protection, management, and planning of all landscapes—and promotes multi-level (vertical) and multi-actor (horizontal) engagement across the entire policy cycle. In practice,

however, these ambitions are often constrained by expert-driven governance and conventional consultation formats that struggle to surface and reconcile diverse perspectives, highlighting the need for more dialogic, interactive approaches for engagement.

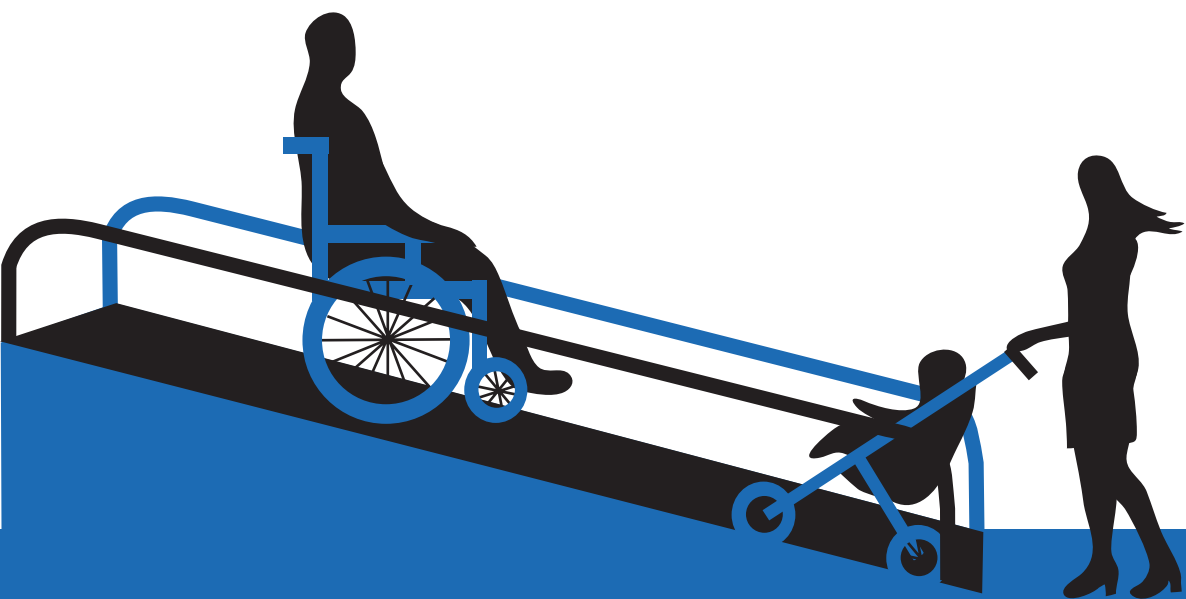
Second, Section 2.2 traced the evolution of serious participatory landscape games from leisure activities to tools for participatory landscape governance. These fully fledged games constitute the participatory process itself. Through rules, roles, objectives, and progression, they frame landscape issues and guide interaction toward collaborative problem-solving and decision-making—rather than merely making meetings or participatory platforms playful or gameful. Designed for small-group, face-to-face engagement, they address a wide range of landscape issues across governance levels, thematic fields, and policy stages, aligning closely with the Convention's democratic aims. Yet little theoretical work explicitly situates these games within the participatory framework of the Convention, particularly in explaining how game-facilitated interaction supports its core aims of shared meaning-making, acceptance of differences, identification of common ground, and negotiated compromise (Council of Europe, 2008, II.2.3.A).

Third, Section 2.3 highlighted that serious participatory landscape games create a distinctive communicative environment in which players collaborate in small groups to solve problems and make decisions collectively. The purpose of communication within these games is therefore problem-solving and decision-making, which—similarly to traditional facilitation methods—are presumably achieved through a balance between task structure and interactional freedom. However, the literature on this topic remains incomplete. While some scholars have examined the interaction patterns characteristic of games and others have explored the design principles that shape gameplay, the connection between the two—how different design strategies structure communication and generate specific interaction types—has not yet been systematically investigated. Moreover, methodological tools capable of visually and analytically representing how communication unfolds over time, space, and the course of gameplay are also lacking.

Synthesizing these strands reveals three critical gaps that this research addresses:

- **Knowledge gap:** A lack of integrated understanding of how game design shapes both the structure and the interaction dynamics of small-group communication during gameplay.
- **Methodological gap:** The absence of analytical and visualization tools capable of representing how communication and interaction unfold throughout gameplay, across its temporal, spatial, and procedural dimensions.
- **Theoretical framing gap:** A lack of theoretical integration linking the European Landscape Convention's vision of landscapes as shared perceptions and democratic exercises of participation with the communicative processes unfolding within serious participatory landscape games.

Addressing these gaps requires a framework capable of analyzing how serious participatory landscape games scaffold communication across time and space—grounded in social-constructivist landscape theory, small-group communication research, and communicative action theory. The next chapter develops this integrated theoretical and methodological framework, providing the foundation for the empirical investigation of gameplay sessions.



Part III.

Theoretical Framework and Methodology

3

Theoretical Framework

Building on the findings of the literature review, this chapter establishes the theoretical foundations of the research. The previous chapters demonstrated that serious participatory landscape games offer a promising participatory format; however, the mechanisms through which they structure communication, generate shared landscape meanings, and support democratic decision-making remain insufficiently understood. Addressing these knowledge, methodological, and theoretical gaps requires an integrated framework that links game design to the communication processes, social meaning-making, and decision-making it facilitates.

To address this need, the present research proposes a triangulated theoretical model (Section 3.1) that combines three complementary perspectives: (1) a structural–analytical perspective that examines how game design organizes and shapes communication (Section 3.2); (2) a meaning–constructive perspective that explores how shared understandings of landscape are created through communication (Section 3.3); and (3) a deliberative–evaluative perspective that considers how communication within games embodies fairness, inclusion, and democratic decision-making (Section 3.4). These three perspectives are brought together in Section 3.5 to form an integrated framework for analyzing communication in serious participatory landscape games.

3.1 Triangulated Theoretical Approach

This research employs a triangulated theoretical model (Denzin, 2017, Chapter 12) that combines three complementary perspectives—structural–analytical, meaning–constructive, and deliberative–evaluative—to analyze small-group communication in serious participatory landscape games. Each perspective illuminates a distinct dimension of how communication operates during gameplay:

1. **Structural–analytical perspective:** Examines how communication unfolds in games and how game design structures small-group interaction, based on Duke's (1974; Duke & Geurts, 2003b) theory of games as communicative environments.
2. **Meaning–constructive perspective:** Explores how landscape meanings are co-constructed through communication and social interaction, drawing on social constructivist landscape theory (Berger & Luckmann, 1966; Kühne, 2018b, 2019b, 2019c).
3. **Deliberative–evaluative perspective:** Considers how far these communicative processes embody democratic ideals of fairness, inclusion, and reasoned dialogue, as framed by communicative action theory (Habermas, 1984, 1987, 1990b).

Together, these perspectives allow the analysis to move between structure and interaction (how communication is organized), meaning (how participants construct shared understandings), and deliberation (how interactions reflect fairness and collective reasoning). This integration is illustrated in Fig. 3.1, which maps the analytical contributions of the three theories to the goals of the research.

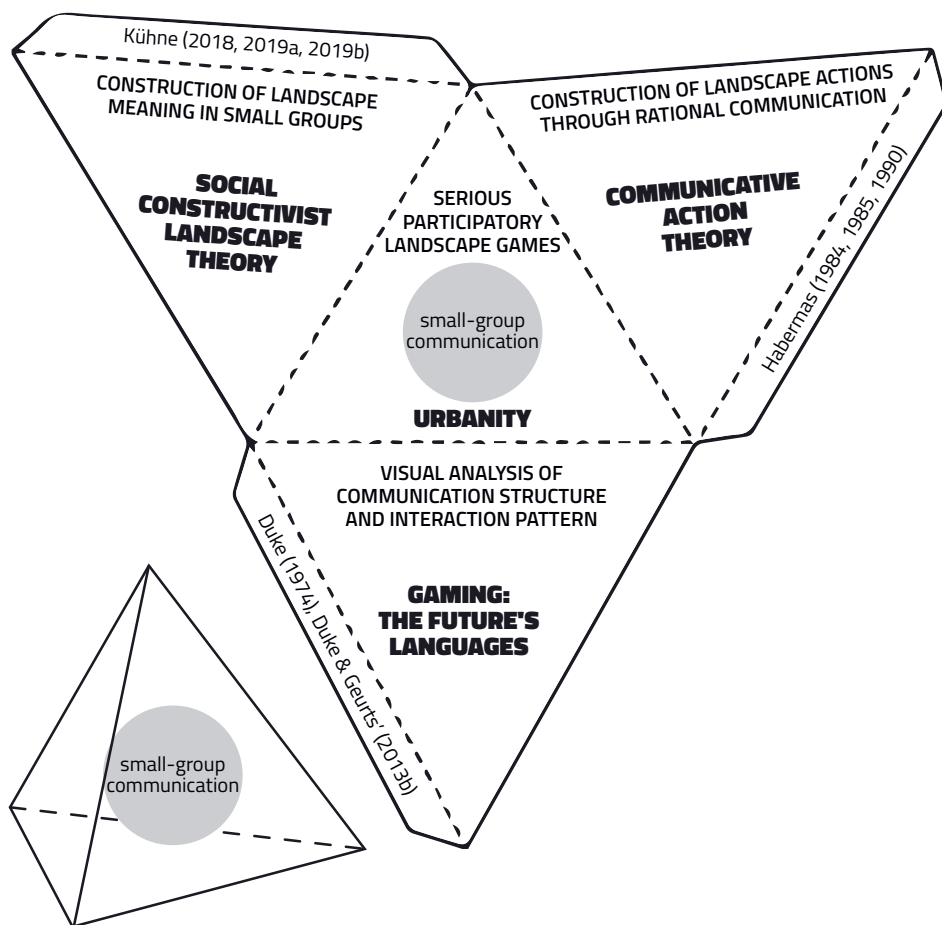


Fig. 3.1 Triangulated theoretical framework for analyzing small-group communication in serious participatory landscape games. Graphic by the author.

3.2 Serious Participatory Landscape Games as Communicative Environments

This section moves towards establishing the structural foundation for the visual analysis method developed later in this dissertation. It revisits Duke's (1974) conceptualization of games as intentionally designed communicative environments—the first component of the triangulated framework—and explores how this concept can be extended through insights from small-group communication research. In doing so, it lays the theoretical groundwork for analyzing how communication is structured and unfolds within gameplay.

The section begins by outlining Duke's definition of games as integrated communicative systems (Section 3.2.1), followed by an examination of his visual notation for interaction patterns and its limitations (Sections 3.2.2–3.2.3). The discussion then turns to early communication network models by Bavelas (1948), Leavitt (1949), and Shaw (1964, 1981a) to identify visual motifs relevant for temporal and spatial analysis (Section 3.2.4). Finally, Section 3.2.5 summarizes the visual components that form the foundation of a new, context-sensitive visual language for analyzing communication in serious participatory landscape games.

3.2.1 Games as Intentionally Designed Communicative Environments

Duke's foundational insight is that games are not merely tools for learning or planning, but deliberately designed modes of communication—purposefully created to support small groups in discussing and solving complex (urban) landscape problems (Duke, 1974, pp. xvi–xvii). In *Gaming: The future's language*, he argues that conventional formats such as lectures or reports rely on linear exploration of a landscape problem, which fails to capture the systemic complexity of real-world challenges (Duke, 1974, pp. 3–11). Games, by contrast, enable a “gestalt understanding” (Duke, 1974, p. 9)—allowing participants to experience and interpret systems as integrated wholes. As such, they function as “future's languages”: communicative systems specifically designed to help groups simulate, explore, and negotiate alternative futures (Duke, 1974, p. 11).

At the heart of Duke's theory lies the idea that every communication system consists of three interrelated components:

- **Language:** The symbols and conventions used to convey meaning—whether standardized (e.g., spoken language, mathematics) or situation-specific (e.g., medical jargon, game-specific codes) (Duke, 1974, pp. 19–20).
- **Communication technology:** The natural (e.g., human voice and ear) and artificial media (e.g., printing, telephone, film, slide projection) through which messages are transmitted (Duke, 1974, p. 21).
- **Interaction patterns:** The structure and flow of communication between participants—ranging from one-way or two-way exchanges to multi-person dialogues such as sequential dialogue or multilogue (Duke, 1974, pp. 21–23).

These three dimensions—symbolic, material, and relational—form a conceptual foundation for analyzing communication within games. What makes games distinct is how they integrate these elements into a dynamic, multimodal system (Duke, 1974, pp. 17–30). By mobilizing multiple communication technologies—such as speech, gesture, physical artefacts, and digital interfaces—games create hybrid languages that combine standardized forms (e.g., spoken language) with emergent, context-specific codes and in-game jargon. This system supports a characteristic interaction pattern known as multilogue: a simultaneous

exchange among multiple actors working collaboratively on a shared problem.

Duke and Geurts (2003b, pp. 143–149) later deepened this perspective by linking it to empirical small-group communication research (Hirokawa et al., 1996). They argued that games, like small-group interactions, can be examined through several analytical lenses—such as communication networks, modalities, procedures, and behaviors (Table 3.1). While these dimensions open diverse pathways for studying communication, the present research focuses on one aspect: how game design structures communication and generates interaction patterns during play. This focus aligns with the development of a visual analysis method that builds on Duke’s own diagrammatic approach, extending it to capture the temporal and spatial structure of communication in serious participatory landscape games.

In this sense, analog and hybrid serious participatory landscape games can be studied not merely as participatory tools but as intentionally designed communicative environments that structure and generate face-to-face interaction among small groups working collaboratively to address landscape issues. This interpretation provides the theoretical foundation for developing a visual method capable of tracing how communication is structured and evolves during gameplay.

Table 3.1 Dimensions for analyzing games from a communication research perspective. Table by the author, based on Duke and Geurts (2003b, pp. 143–149).

Dimension	Description and connection to games
Communication networks	Definition: The structural configuration of message exchange within a group; communication can be organized in centralized (e.g., chain, wheel) or decentralized (e.g., circle, all-channel) forms (Bavelas, 1948; Hirokawa et al., 1996, p. 274; Leavitt, 1949; Shaw, 1964, 1981a). Connection to games: Duke observed that games shift between different network structures—for example, from open-ended group discussion to a more centralized “fishbowl” feedback format like in University Hospital Game (Duke & Geurts, 2003b, pp. 158–159). This flexibility illustrates how rules intentionally shape the structure of interaction.
Communication modalities	Definition: The channels and modes through which information is exchanged—verbal, visual, tactile, or digital (Hirokawa et al., 1996, p. 275). Connection to games: Duke and Geurts emphasized that games generate multimodal communication: alongside spoken language, they use visual and spatial tools such as maps, cards, or models to support shared reasoning and group understanding (Duke & Geurts, 2003b, p. 159).
Structured procedures	Definition: The rules, phases, and roles that organize and sequence group interaction (Bayless, 1967; Brilhart & Jochem, 1964; Burlison et al., 1984; Dewey, 1910; Gustafson et al., 1973; Hirokawa, 1985; Hirokawa et al., 1996, pp. 275–277; Jarboe, 1988, 1996; Kaner, 1996; Larson, 1969; Littlepage et al., 1995; Maier & Maier, 1957; Maier & Thurber, 1969; Saint & Lawson, 1994; Stephenson et al., 1982; Wates, 2000). Connection to games: Duke noted that games often incorporate classical facilitation techniques (such as the Delphi or Nominal Group Technique), using structured rounds and phases to guide collective decision-making and problem-solving.

Dimension	Description and connection to games
Communication behaviors	Definition: The qualitative characteristics of interaction—clarity, timing, constructiveness, and feedback (Gouran et al., 1978; Leathers, 1972). Connection to games: Games embed feedback loops, scoring systems, and role-based cues to promote constructive, reflective, and participatory communication.

3.2.2 Towards a Language of Interaction Visualization

Building on the idea that games are intentionally designed communicative environments, this section explores how Duke (1974) began to visualize the communication and interaction patterns they generate. This represents the first foundation for developing a visual method capable of tracing how communication is structured and how interaction evolves during gameplay.

To illustrate the unique characteristics of multilogue—defined as “multiple, simultaneous dialogue” and described as the “primary interaction pattern in gaming/simulation [...] central to the game’s ability to display gestalt” (Duke, 1974, p. 23)—and to distinguish it from other forms such as one-way transmission (e.g., commands), two-way dialogue (e.g., conversation), and multi-person, turn-based sequential dialogue, Duke developed a series of communication models (see Fig. 3.2). These models employ a visual language grounded in communication theory and systems analysis (Duke, 1974, pp. 22, 37, 41; Narula, 2006).

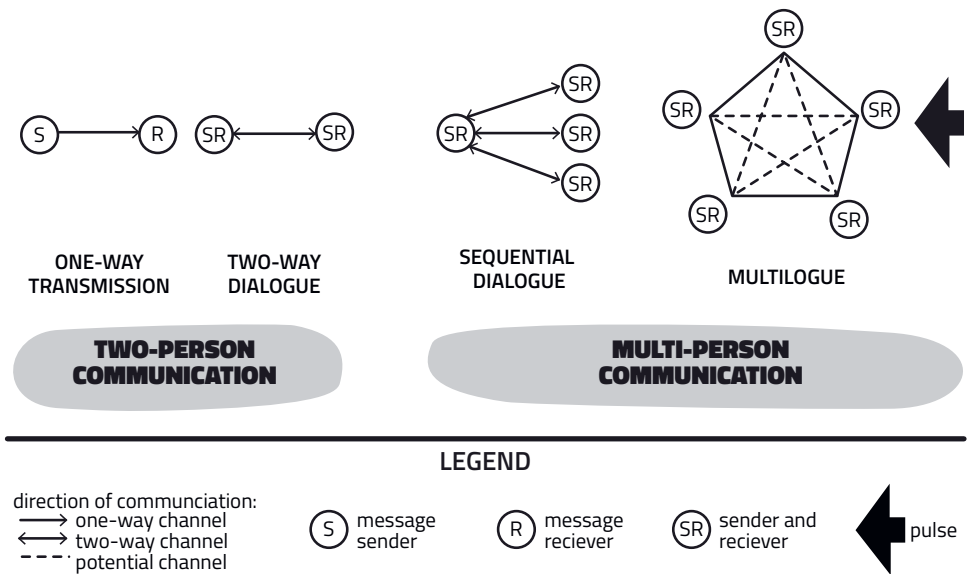


Fig. 3.2 Interaction patterns in Duke's communication models. Graphic by the author, adapted from Duke (1974, p. 22).

Duke's visual notation uses a concise and systematic vocabulary:

- **Circles:** Represent participants.
- **Letters:** Indicate speaker roles. S for Sender, R for Receiver, and S/R for participants fulfilling both roles.

- **Arrows:** Indicate the direction of communication. One-way transmission is shown with a single arrow from sender to receiver (Duke, 1974, p. 33), while two-way dialogue is represented by a double-headed arrow indicating reciprocal exchange (Duke, 1974, pp. 33–36).
- **Dashed lines (without arrows):** Suggest potential but unrealized communication channels.

The resulting diagrams are simplified models that illustrate who speaks, who listens, and who is able to communicate with whom—making visible the possibilities, as well as the direction and flow of messages. In addition, they reveal the hierarchical structures of communication: in sequential dialogue, all arrows point from audience members toward the presenter, whereas in multilogue, the arrow configuration displays a decentralized, more organic web of exchanges among players working collaboratively on a shared landscape challenge.

Building on these models, Duke also developed more detailed representations of these two types of multi-person interaction, the introduction of which follows.

3.2.2.1 Sequential Dialogue

The detailed models introduce new symbols and convey additional layers of information. As mentioned above, the sequential dialogue model (1974, p. 39) visualizes a facilitator-led setting—such as a lecture or Q&A session—in which a central figure initiates topics and responds to individual contributions, while participants do not interact directly with one another (Duke, 1974, pp. 22–23, 36–40). This top-down, turn-based format is typical of formal communication settings: it maintains order and focus but limits dialogic depth and diversity (Duke, 1974, p. 40).

The visualization of this communication situation expands Duke's visual language beyond circles, letters, and arrows. Letters now indicate specific roles, such as L for lecturer, while arrows differentiate between actual exchanges (a solid arrow for the lecturer's actual presentation) and potential exchanges (a striped arrow between the lecturer and the audience). The model also introduces temporal structuring, using numbered indices (e.g., T_1 , T_2) to mark turn-taking, and topical referencing, represented by a topic bar that tracks the themes addressed by the lecturer (labeled A–G) and new topics introduced by the audience (marked X, Y, Z; for instance, $T_1(G)$ indicates that Turn 1 addressed Topic G). Although the spatial layout may suggest physical arrangement, it remains symbolic—emphasizing communicative connections rather than real positioning. Collectively, these refinements enable the visualization to represent not only who communicates with whom, but also when and about what the exchanges occur (see Fig. 3.3).

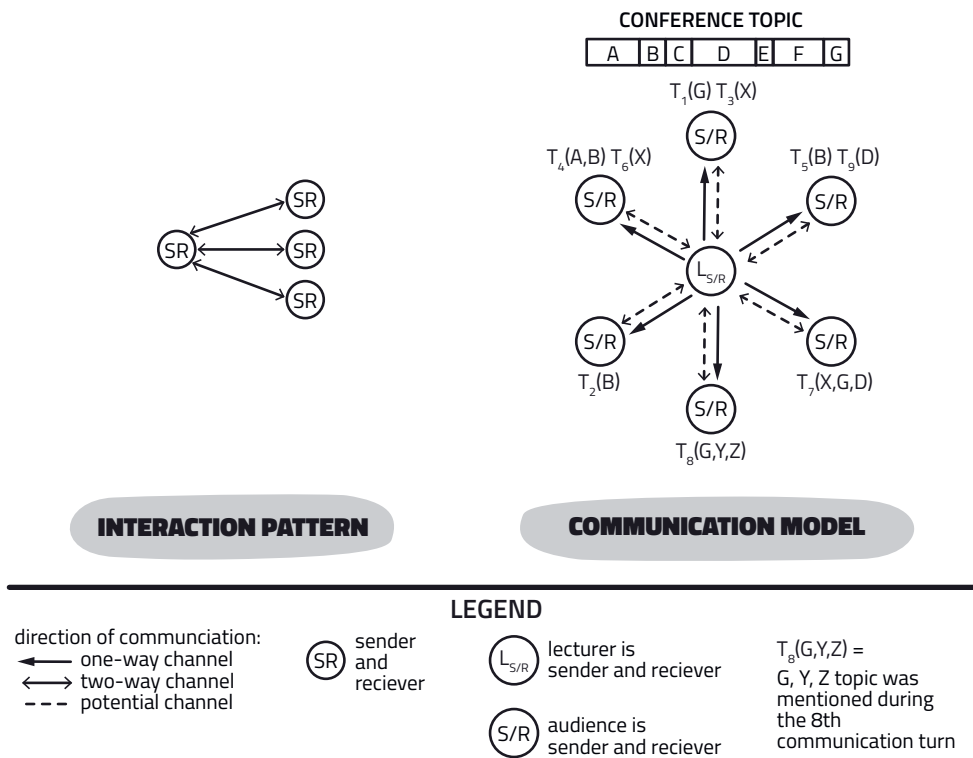


Fig. 3.3 Multi-person sequential dialogue: Interaction pattern and communication model. Graphic by the author, adapted from Duke (1974, p. 37).

3.2.2.2 Multilogue

The multilogue model (1974, p. 41) builds upon the previous one by visualizing a more open and decentralized form of communication, in which all participants can potentially interact with one another. It depicts simultaneous, overlapping exchanges that emerge around a shared issue or pulse, illustrating the collaborative and fluid nature of communication in gameplay contexts (Duke, 1974, pp. 23, 40–42). This model therefore reflects participatory settings—such as small-group workshops or game sessions—where dialogue is co-constructed in real time rather than directed from a single source.

The visualization introduces several refinements that extend Duke's language of interaction. The same basic coding is maintained—circles for participants, S/R to mark speakers and responders, and solid versus striped arrows to differentiate actual and potential exchanges—but the arrangement of arrows now forms a decentralized, web-like structure. Two-headed arrows represent reciprocal communication, emphasizing the absence of hierarchy and the equality of exchanges among participants. A new symbol—the pulse (Duke, 1974, p. 23)—appears at the center of the diagram, marking the shared problem or topic that drives the conversation. Similar to the sequential dialogue model, a topic bar may indicate the thematic focus of exchanges, but here the emphasis shifts from turn order to simultaneity and mutual referencing among participants. The

spatial layout again remains abstract, symbolizing communicative connectivity rather than actual physical positioning.

Taken together, these features enable the multilogue model to capture the distinctive, polycentric communication dynamic of games: multiple voices interacting in parallel around a common concern, collectively constructing understanding rather than exchanging turns in a fixed sequence (see Fig. 3.4).

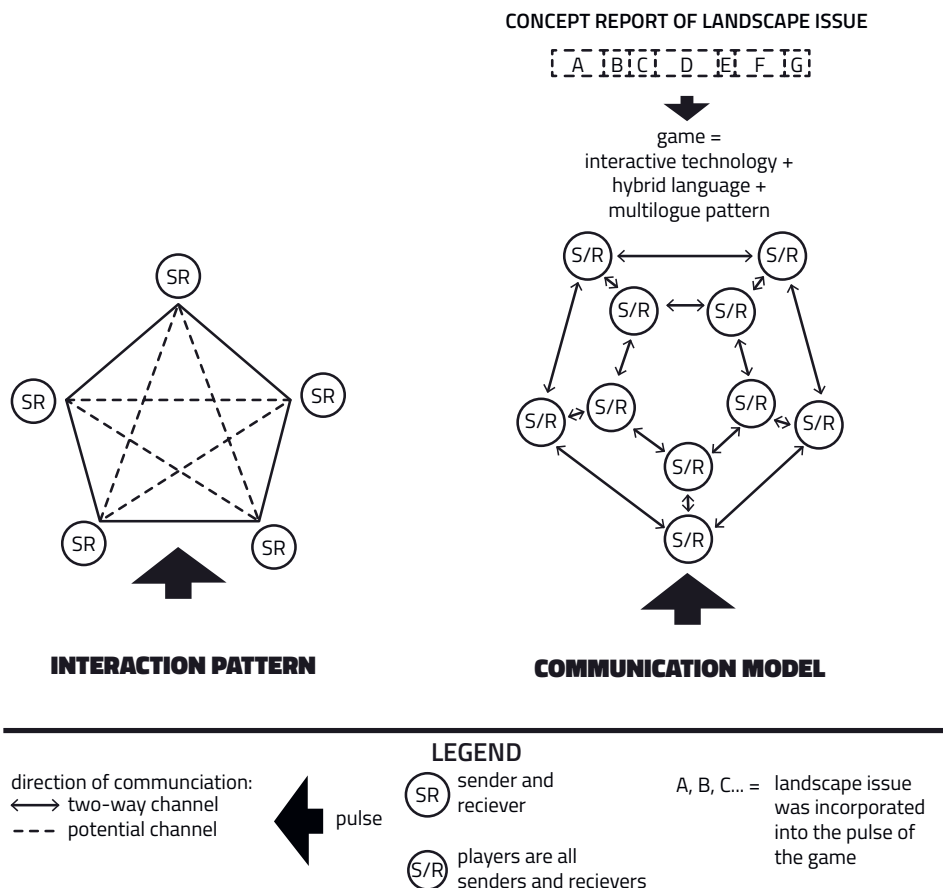


Fig. 3.4 Multilogue: Interaction pattern and communication model. Graphic by the author, adapted from Duke (1974, p. 41).

3.2.3 Analytical Strengths and Limits of Duke's Visual Language

Together, Duke's (1974; 2003b) models—from the simple dyadic exchanges to the more complex representations of sequential dialogue and multilogue—demonstrate his ambition to make communication patterns in games visible and analytically accessible. His visual language successfully depicts participation roles, message direction, and the degree of openness or hierarchy within group interaction. When applied to the analysis of other analog and hybrid

serious participatory landscape games—where players engage in face-to-face interaction to address landscape issues—this framework offers a promising starting point for identifying who communicates with whom and under what structural conditions.

Duke's visual language is conceptually clear and intuitive (see Table 3.2). Circles, arrows, and letters form a concise grammar that reveals the relational structure of communication. His more advanced models add temporal and thematic dimensions—through turn-taking indices and topic bars—marking an important step from viewing communication as static transmission to seeing it as a structured process unfolding over time and organized around shared topics.

However, the analytical scope of Duke's models remains limited in several important ways.

First, although Duke identified various interaction formats, he emphasized multilogue as the characteristic communication pattern of games, developing his most elaborate visualizations for this case. This focus, however, captures only one type of interaction moment that may occur during gameplay. In practice, games also generate other communicative situations—such as instruction giving, turn-based decision-making, negotiation, or reflection—that remain unrepresented in his framework.

Second, this visualization technique has not been applied to other genres of serious participatory landscape games—such as design games, co-design processes, generative city gaming, and deliberative formats. As a result, we still lack knowledge of whether these other formats display distinct characteristic interaction patterns, or how they could be systematically analyzed from an interactional perspective (Brković Dodig & Groat, 2021b; Duke, 1964; Duke & Geurts, 2003b; Gordon et al., 2017; Johnson et al., 2017; Sanoff, 1979; Tan, 2014; Tóth & Szilágyi-Nagy, 2021).

Third, Duke's diagrams illustrate isolated communicative moments without situating them in the broader temporal progression of gameplay. The multilogue episode is shown as a distinctive instance of collective discussion, yet we learn little about what precedes or follows it, or how the game's structure itself leads participants into and out of such moments. Consequently, his system cannot depict how communication develops dynamically across the full course of play.

Fourth, the visual notation itself—though precise in representing roles, directions, and topical focus—abstracts from the spatial and material context in which interaction unfolds. It shows who is connected to whom, but not how players' physical proximity, spatial arrangements, or manipulations of tangible objects shape communication. Since these spatial dynamics are integral to the design and experience of serious participatory landscape games, this abstraction limits the framework's explanatory depth.

Table 3.2 Summary of visual language elements used by Duke. Table by the author.

Visual Aspect	One-Way Transmission	Two-Way Dialogue	Sequential Dialogue	Multilogue
Definition of the Interaction Pattern	Message sent from one participant to another without feedback.	Reciprocal message exchange between two participants.	Central figure exchanges messages with others in structured turns.	Multiple participants engage in simultaneous dialogue around a shared issue, i.e. pulse (Duke, 1974, p. 23)
Participants Connected	Single arrow from S to R	Double-headed arrow between two S/R participants	Arrows from peripheral S/R participants to central LS/R	Dashed lines (potential links) or arrows (actual exchanges) among all S/R participants
Communicative Roles	S = Sender, R = Receiver	S/R = Sender/Receiver	L _{S/R} = Lecturer-Sender/Receiver, S/R = Audience	S/R = All participants share sender/receiver roles
Time Represented	No	No.	Yes, via turn numbering (e.g., T ₁ , T ₂ ...)	No
Topics Represented	No	No	Yes, topic bar tracks sequence (A–G, X–Z)	Yes, topics derive from or emerge around the pulse (Duke, 1974, p. 23)
Roles	None	None	Central presenter and audience	All participants equal
Spatial Layout	Symbolic only	Symbolic only	Symbolic positioning of presenter (not literal layout)	Symbolic distribution suggests equality, not physical position

In sum, Duke's visual language provides a valuable conceptual foundation for analyzing communication in serious participatory landscape games, yet its analytical reach remains partial. While it makes interaction structures visible and helps identify roles, directions, and topics of communication, it focuses primarily on multilogue, leaving other communicative formats and game genres unexplored. Moreover, the models capture only isolated interaction moments rather than the full communicative process unfolding across gameplay, and they omit the spatial and material dimensions that shape how communication occurs. To understand more comprehensively how games structure and generate interaction—how exchanges evolve, connect, and are situated in space—Duke's notation must be extended with temporal and spatial perspectives. The following section therefore revisits foundational small-group communication models to enhance Duke's approach and lay the groundwork for a new temporal-spatial visual analysis method.

3.2.4 Revisiting Small-Group Network Visualization

To extend Duke's visual language beyond static and spatially unreferenced representations, this section revisits the foundational network models that both offer valuable insights and reveal important analytical limitations (Bavelas, 1948; Leavitt, 1949; Shaw, 1981b, pp. 150–161).

3.2.4.1 Bavelas's Network Analysis

Bavelas' (1948) network analysis introduced one of the earliest visualizations of small-group communication using simple node-and-line diagrams (Fig. 3.5). In these diagrams, dots labeled with letters (e.g., A, B, C) represent individuals, and undirected lines indicate the available communication channels between them. These abstract representations do not differentiate between sender and receiver roles—each node can act as both—reflecting Bavelas' goal to formalize communication structures mathematically.

The model emphasizes network shape, centrality, and informational distance rather than actual exchanges, timing, or physical arrangement. While it enabled early studies of communication efficiency and flow, it remained disconnected from the embodied and temporal realities of interaction.

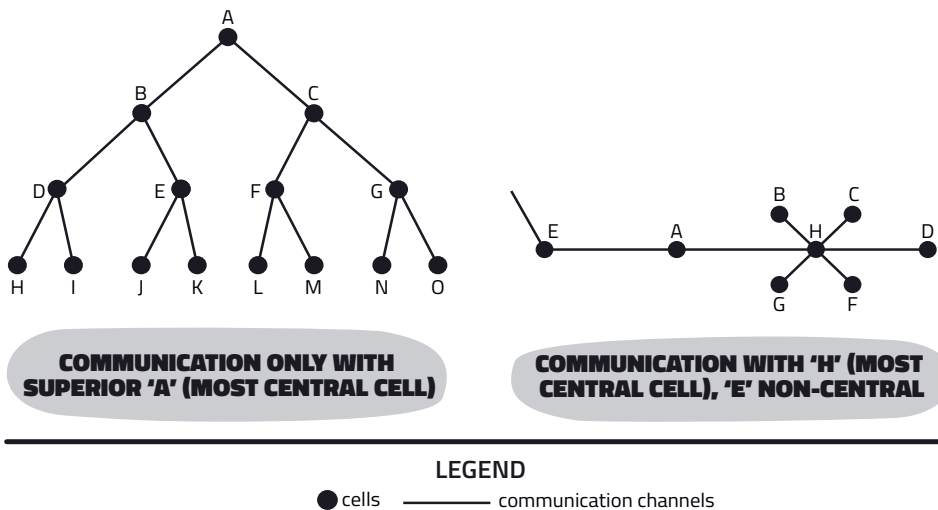


Fig. 3.5 Bavelas' mathematical model. Graphic by the author, adapted from Bavelas (1948).

3.2.4.2 Leavitt's Enhancements to Network Analysis

Leavitt's (1949) diagrams build on Bavelas' work by exploring how structural templates—such as the wheel, Y, chain, and circle—shape small-group problem-solving. He demonstrated that not all possible links must be used for a task to succeed (pattern flexibility) and that a single structure can support multiple successful communication flows (operational flexibility). Most importantly, he introduced the concept of pattern similarity: structurally equivalent networks may appear visually different, but as long as their linkages remain intact, they represent the same interaction pattern—emphasizing structure over spatial layout. These three concepts are illustrated in Fig. 3.6.

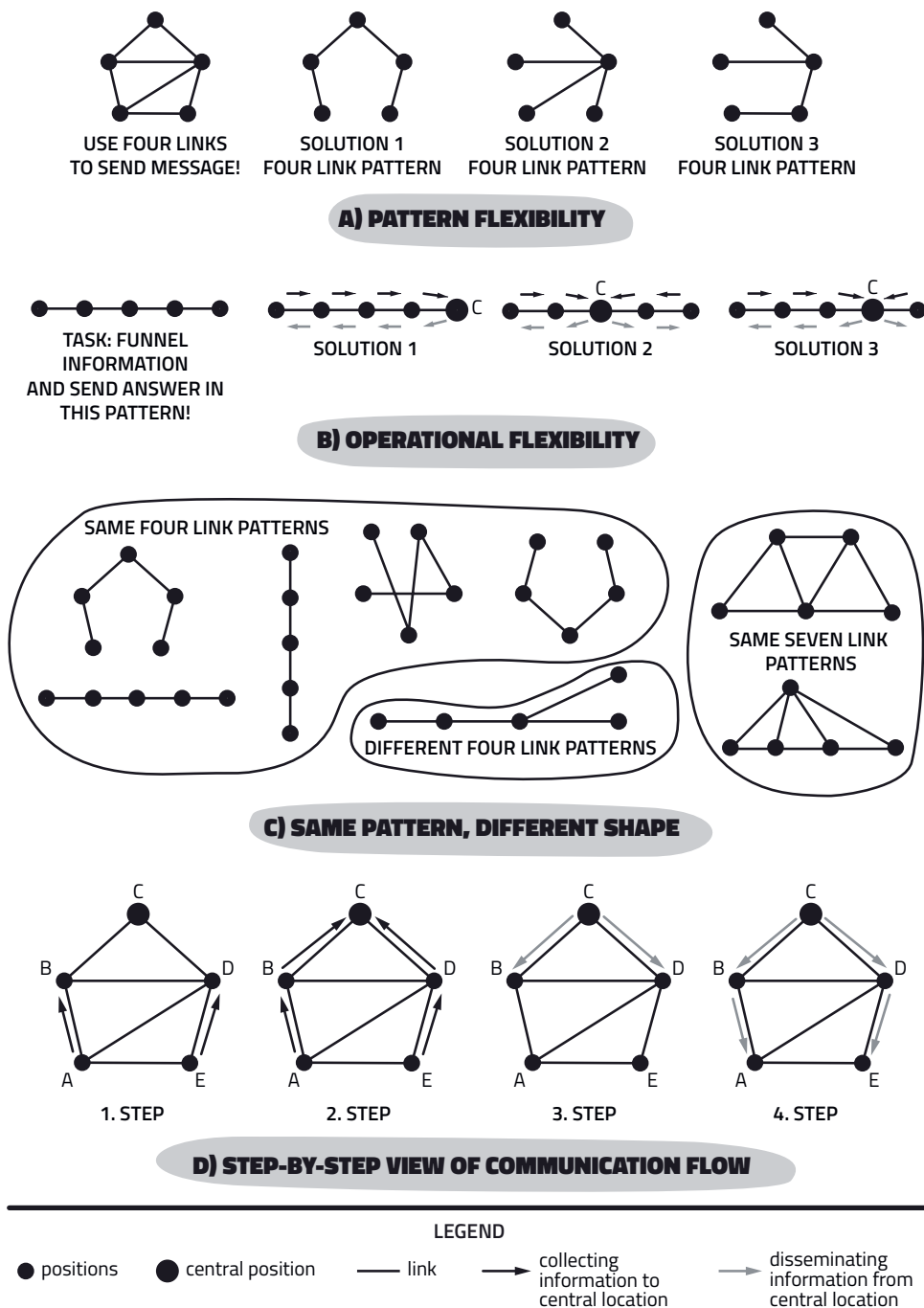


Fig. 3.6 Leavitt's network model. Graphic by the author, adapted from Leavitt (1949, p. 4).

Although Leavitt's visual system does not account for spatial positioning, it offers four representational strategies that can inform the development of a more refined visual analysis method for small-group communication in serious participatory landscape games:

- **Use of color:** Leavitt (1949, p. 7) introduced color-coded arrows to indicate not only direction but also the purpose of communication—whether information is being gathered or disseminated. Arrows pointing toward the central member (C) were black, while those from the center were red (rendered here in grayscale).
- **Node size:** Larger nodes denote structurally central actors, visually revealing patterns of hierarchy or influence.
- **Temporal snapshots:** Leavitt's (1949, p. 6) most significant innovation was sequencing diagrams into discrete steps (e.g., Step 1 through Step 4), each marking a moment in the communication process—such as “Step 1: A and E send their information to B and D” (Leavitt, 1949, p. 6). These stages made it possible to trace the dynamic flow of messages over time, adding a temporal dimension absent from earlier network models.

3.2.4.3 Shaw's Spatial Turn

Although Shaw's (1964; 1981a, p. 139) diagrams resemble those of Bavelas (1948) and Leavitt (1949)—using nodes and links to depict communication structures in experimental studies (Fig. 3.7)—his analytical focus shifted toward the physical and material environments in which communication unfolds.

While acknowledging that network diagrams can represent communicative distance (i.e., the number of relational links between participants), Shaw emphasized that other spatial and environmental factors equally shape small-group interaction: who sits where, how close people are, and what surrounds them.

His key contribution, from the perspective of this research, lies in reframing communication as a spatially and materially situated process rather than a purely structural one. Although these dimensions are absent from his diagrams, they provide a valuable foundation for developing analytical methods that more effectively account for the spatial aspects of interaction during gameplay in serious participatory landscape games.

- **Spatial arrangement:** How people are positioned—such as sitting around a table—affects body orientation, visibility, and access to turns in conversation. Circular setups tend to promote inclusivity and mutual awareness, while classroom-style or hierarchical layouts may reinforce dominance and silence certain voices (Shaw, 1981a, pp. 131–137).
- **Territoriality:** Individuals or subgroups often claim physical or symbolic space. This sense of ownership can foster psychological safety and participation—or, if contested or unclear, lead to exclusion (Shaw, 1981a, pp. 116–119).
- **Personal space and interpersonal distance:** Comfort with proximity is shaped by culture, gender, age, and social history. Too much distance may reduce spontaneity; too little can cause discomfort or assertiveness, depending on context. High participant density can produce stress,

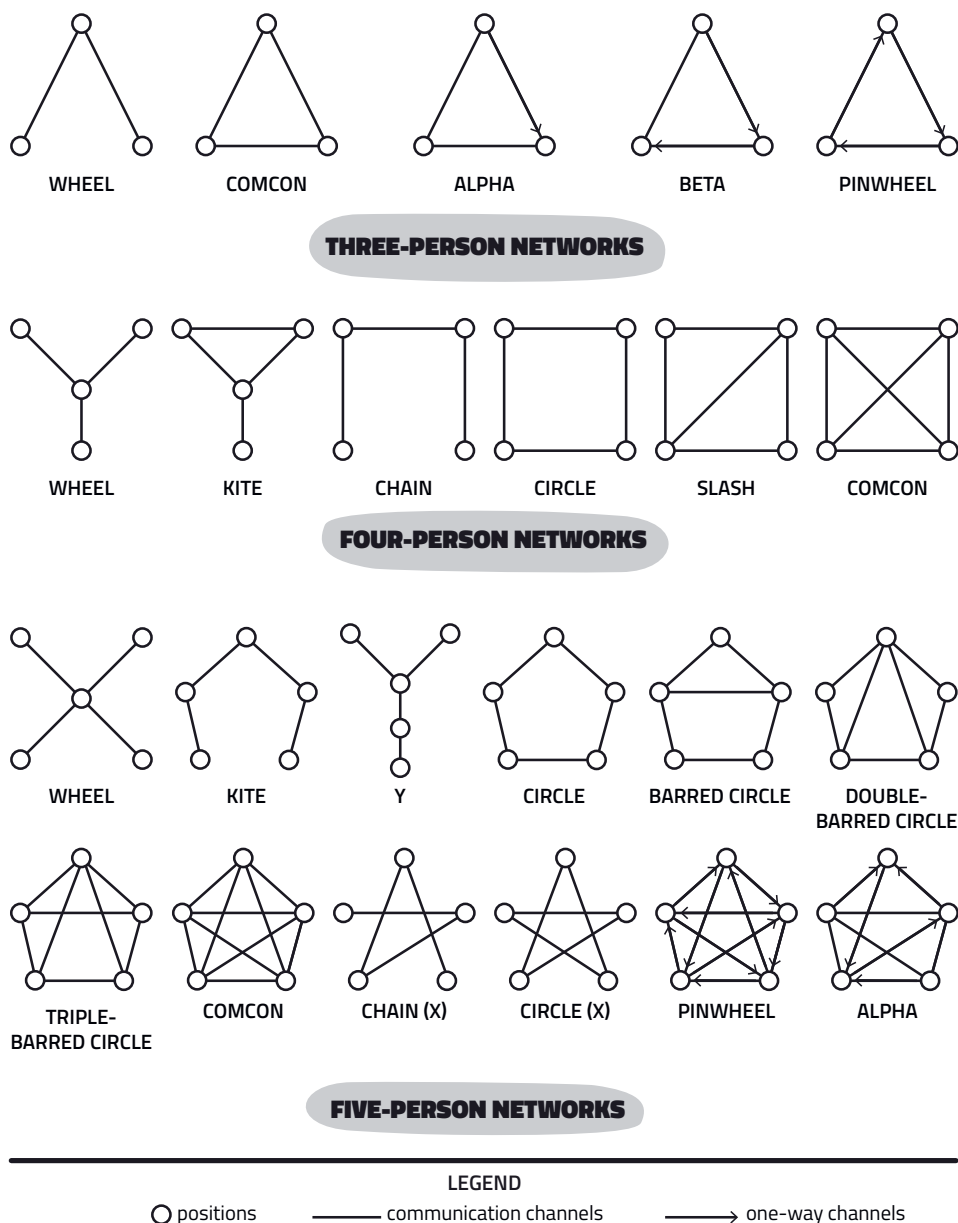


Fig. 3.7 Communication networks in experiments. Graphic by the author, based on Shaw (1964; 1981a, p. 139).

overstimulation, or competition for attention—especially in emotionally or cognitively demanding discussions—making communication less clear and less equitable (Shaw, 1981a, pp. 119–130).

- **Material and atmospheric conditions:** Elements such as lighting, acoustics, color, and furniture design subtly shape the emotional and cognitive climate. Softer lighting and informal setups may support open dialogue, whereas

harsh lighting or noisy environments can hinder it (Shaw, 1981a, pp. 114–116).

- **Proximity:** Shaw defined proximity as “the physical distance between individuals” (Shaw, 1981a, p. 83), which correlates with how often people are exposed to one another’s presence and influence. Closer proximity tends to increase affiliation, interaction frequency, and mutual responsiveness.

3.2.5 Summary and Analytical Relevance: Establishing the Basis for a Temporal–Spatial Visual Analysis

This section consolidates insights from previous traditions of small-group communication visualization—in games and other communicative contexts—to establish the theoretical foundation for the visual analysis method developed and applied in this research. The aim is to identify and adapt analytical tools capable of representing how serious participatory landscape games structure communication and generate interaction throughout the entire gameplay process, within their specific spatial layout and material setting.

Duke’s (1974) communication models provided the first coherent visual language for depicting communication in games, focusing on interaction patterns among participants and their fixed or potential connections. His models visualize topicality, turn-taking, and message direction, offering a structural understanding of group dialogue. Bavelas (1948) and Leavitt (1949) extended this approach through network analysis, clarifying the absence of spatial reference in earlier models while introducing techniques for visualizing communication through sequenced temporal snapshots—showing how interaction unfolds step by step, and adding colors to the otherwise black and white visualizations opening new opportunities in details. Shaw (1964, 1981a), although not visualizing these relations directly, shifted attention toward the spatial and material conditions of communication, highlighting how proximity, layout, and the physical environment influence interaction dynamics.

Together, these approaches demonstrate both the potential and the limits of existing visualization traditions. They make communication structures visible yet remain detached from the embodied and spatial context of play, and they isolate interaction into static moments without depicting the temporal sequencing through which communication is structured across gameplay.

Building on these insights, the present research develops a temporal–spatial visual analysis method designed to capture how communication evolves across gameplay phases (temporal structure) and how games spatially organize interaction (material and spatial dimensions). This method adds layers of spatial reference to existing symbolic representations so that diagrams can reflect not only potential communication channels but also actual connections among players in real time and space.

The first step in this development is the creation of a visual motif library (Table 3.3), which integrates and extends existing symbolic elements into a flexible analytical grammar for representing:

- **Temporal succession and structural change:** How communication is structured and how patterns evolve during gameplay, following Leavitt's (1949, p. 6) sequencing and Duke's (1974, p. 37) turn-based modeling;
- **Spatial-material context:** How proximity, layout, and environmental conditions shape participation and interaction, inspired by Shaw's (1964, 1981a) work on spatial aspects.

This visual motif library serves as the analytical starting point for developing a visual language suited to representing communication dynamics in serious participatory landscape games. Its experimental field of testing and refinement will be the four selected **Urbanity** game prototypes, as described in the methodological chapter. These case studies will enable the visualization of:

- how gameplay structures small-group communication (steps and sequences of interaction),
- what interaction patterns emerge (participants, messages, and their directions), and
- how these interactions are situated in space (the positioning of players within the game environment).

Through these applications, the motif library will evolve into a context-sensitive visual system capable of capturing both the process and the spatial embodiment of communication—thereby addressing the methodological gap identified earlier and advancing the participatory understanding of landscape games in line with the European Landscape Convention.

Table 3.3 Visual motif library for representing small-group communication in serious participatory landscape games. Table by the author, based on Duke (1974), Bavelas (1948), Leavitt (1949), and Shaw (1964, 1981a).

Visual Motif	What It Represents
Dots or Circles	Individual participants. Size may indicate centrality, status, or influence.
Letters	Letters are used in multiple ways: as participant identifiers when placed next to dots or circles (e.g., A, B, C), as discussion topics when placed in brackets (e.g., A–G for prepared topics, X–Z for emergent ones), and as communication roles when placed inside circles (e.g., S = sender, R = receiver, S/R = both roles).
Arrows	Direction of communication. One-way for single-direction flow, double-headed for reciprocal exchange.
Lines	Communication channels. Solid = active/realized; dashed or striped = potential or inactive.
Brackets	Brackets (..) indicate topical reference when placed next to a turn or player, e.g., T ₁ (G).
Subscripts	Indicate temporal sequence or turn-taking (e.g., T ₁ , T ₂).
Color	In Leavitt (1949), used to mark direction and function (e.g., gathering vs. dissemination).

Visual Motif	What It Represents
Pulse Icon	Visual marker for the shared issue or theme animating interaction—represents emergent or agreed-upon topics central to gameplay (Duke, 1974, p. 23).
Circle Positioning	Currently used symbolically.
Temporal Aspects	Numbered steps, directional flows, or turn markers used to visualize interaction unfolding across time.
Spatial Aspects	To be developed as part of visual experimentation. Categories may include (Shaw, 1981b): player arrangements (circular vs. classroom-style layouts), interpersonal distance (proximity), territoriality (space ownership), density and crowding, material features (light, furniture, game layout), environmental context (room shape, layout, indoors/outdoors).

3.3 The Social Construction of Landscape Meanings in Serious Participatory Landscape Games

This section moves towards establishing the interpretive foundation of the research by introducing social constructivist landscape theory (Berger & Luckmann, 1966; Kühne, 2018b, 2019b, 2019c) as the second component of the triangulated theoretical framework. It applies this perspective to understand how serious participatory landscape games function as structured environments in which participants bring their experiences, exchange perspectives, and jointly construct, contest, and reinterpret landscape meanings. In doing so, it addresses the theoretical gap identified earlier—the need to explain how such games contribute to the shared social construction of landscape, as emphasized in the European Landscape Convention.

The section begins by situating social constructivism among the theoretical approaches applied in landscape research (Section 3.3.1), followed by an outline of its key concepts—everyday reality, knowledge stocks, and the processes of externalization, objectivation, and internalization (Section 3.3.2)—and a discussion of its historical roots and analytical focuses within landscape research (Section 3.3.3). It then introduces Kühne’s analytical models: the four dimensions of landscape (Section 3.3.4.1), the step-by-step process of meaning-making (Section 3.3.4.2), and the phases of landscape socialization (Section 3.3.4.3). Finally, Section 3.3.5 summarizes the analytical relevance of this perspective for examining small-group communication in serious participatory landscape games.

3.3.1 The European Landscape Convention and Constructivist Understandings of Landscape

The concept of landscape is inherently multidimensional, interpreted through theoretical lenses that variously foreground the material (e.g., topography, vegetation, spatial form), the individual (e.g., perception, memory, emotion), or the social (e.g., cultural narratives, discursive practices, institutional norms). As Kühne (2019b, p. 135) notes, each lens illuminates only part of the phenomenon—no

single framework can capture its full complexity. Fig. 3.8 visualizes these emphases, following Kühne's classification (2019b; 2019).

Against this plural background, the European Landscape Convention adopts a definition that foregrounds perception: "an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors" (Council of Europe, 2000a, Article 1(a)). This phrasing aligns with a constructivist understanding—landscape is not an objective entity but a phenomenon co-produced through interpretation, communication, and lived experience (Kühne et al., 2019, pp. 4-5).

However, the Convention's definition is also epistemologically plural (Kühne, 2019b, p. 116). The reference to "natural and/or human factors" reflects a positivist concern with causal, measurable influences, while the notion of "character" may suggest essentialist ideas of stable landscape identities. At the same time, Article 5(c) introduces a neo-pragmatist emphasis on public participation in landscape governance (Council of Europe, 2000a). This coexistence of different strands—described as a postmodern-eclecticist stance (Bruns et al., 2022, p. 52, Chapter 3.5; Kühne, 2019b, p. 116)—allows the Convention to integrate multiple perspectives but also risks conceptual ambiguity (Kühne, 2019b, p. 134).

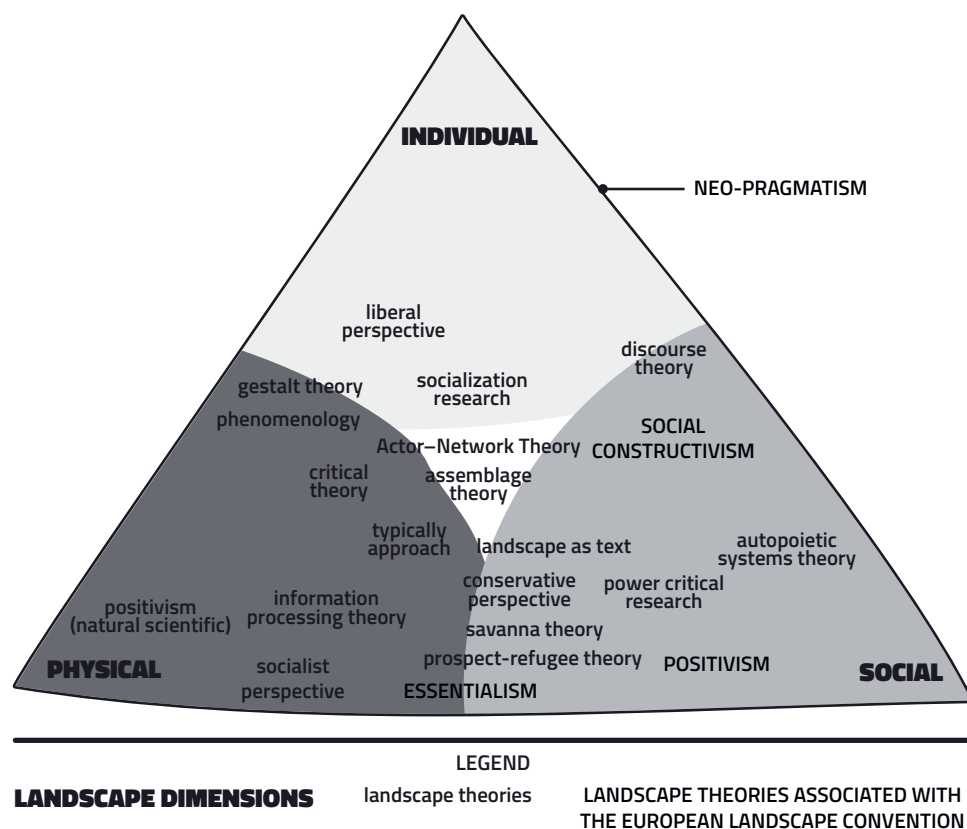


Fig. 3.8 Landscape theories and their relationship to the material, individual, and social dimensions of landscape. Graphic by the author, adapted from Kühne (2019b, p. 135).

Given this openness, the present research adopts a social constructivist perspective—positioned at the intersection of the individual and social dimensions (see Fig. 3.8—as the most suitable framework for examining how shared landscape meanings emerge through face-to-face interaction, language, and communicative exchange in serious participatory landscape games, where diverse actors jointly negotiate visions of landscape futures.

Other constructivist traditions offer complementary but distinct emphases (see Table 3.4). Autopoietic systems theory (Luhmann, 1995) examines how meaning is generated within self-referential systems (e.g., law, planning, science), while discourse theory (Foucault, 1995; Habermas, 1984, 1987, 1989; Laclau & Mouffe, 1985; Mouffe, 1999) analyses how power relations structure dominant and marginal interpretations of landscape. Although these perspectives offer valuable insights, social constructivism is best aligned with this study's focus on meaning-making as a collaborative, negotiated process in small-group settings.

Table 3.4 Comparison of major constructivist landscape theories and their interpretation of landscape. Table by the author, based on Kühne (2019b, pp. 38–39).

Dimension	Social Constructivism	Autopoietic Systems Theory	Discourse Theory
Etymological Origin	<i>Construere</i> (Latin): to build, layer	<i>Autos + poiein</i> (Greek): self + create, make, build	<i>Discursus</i> (Latin): walking around
Foundational Thinkers	Berger and Luckmann (1966); Schütz (1967)	Luhmann (1995)	Foucault (1995); Habermas (1984, 1987, 1989); Laclau and Mouffe (1985); Mouffe (1999)
Key Landscape Research Applications	Cosgrove (1984); Greider and Garkovich (1994); Kühne (2019b)	Heiland (1999); Kühne (2014); van Assche (2010)	Leibenath and Otto (2013); Weber (2015); Weber et al. (2018)
Basic Understanding of Landscape	Landscape is not a fixed object but a socially and individually constructed phenomenon based on shared perceptions and meanings.	Landscape is constructed within the internally consistent logic of functionally differentiated social systems (e.g., law, planning, science).	Landscape is constructed through discursive formations—structured language practices shaped by power relations and ideology.
Landscape Dimension (material/individual/social) (Kühne, 2019b, p. 135)	Social: Emphasizes everyday social interaction as the basis of shared meaning-making.	Social: Focuses on communication within self-referential functional systems. (e.g., planning, science).	Social: Analyzes how discursive struggles over meaning shape what can be said about landscape.
Analytical Focus of the Theory	Meaning-making in interaction	System-internal meaning production	Power in discourse formation

Dimension	Social Constructivism	Autopoietic Systems Theory	Discourse Theory
Explanatory Aim of the Theory	To explain how socially shared landscape meanings are constructed, stabilized, and reproduced.	To understand how systems (e.g., planning, science) construct and differentiate landscape concepts through system-specific communication.	To expose the power relations embedded in landscape discourses and their influence on public and institutional understanding.

3.3.2 The Social Construction of Meaning in Face-to-Face Interaction

The concept of social construction provides a framework for understanding how shared meanings are created and transformed through direct, person-to-person communication. In the context of this research, it helps explain how participants in serious participatory landscape games co-construct landscape meanings through in-game small-group communication.

The theoretical roots of this perspective lie in phenomenological sociology. Building on Edmund Husserl's phenomenology (1913), Alfred Schütz (1967) explored how individuals make sense of their lived world. He argued that meaning arises from experience and is shaped by the social contexts in which people interact. Schütz emphasized that human understanding is always situated—formed within the flow of everyday communication.

Peter L. Berger and Thomas Luckmann (1966) further developed these ideas in *The Social Construction of Reality*, providing the theoretical foundation that underpins most constructivist approaches to landscape. They explained how people experience the world as a coherent “everyday reality” (Berger & Luckmann, 1966, pp. 33–42) and how this reality is continuously co-produced through communication, negotiation, and institutionalization.

Berger and Luckmann describe this process as a cyclical and dialectical relationship between the individual and society, unfolding through three interrelated mechanisms:

- **Externalization (subjective → intersubjective reality):** Individuals express their internal world—thoughts, emotions, and intentions—through social interaction, most vividly through face-to-face communication and language (Berger & Luckmann, 1966, pp. 121–122).
- **Objectivation (intersubjective → objective reality):** Over time, the products of interaction—roles, norms, institutions, categories, and even landscapes—become stabilized. They appear as fixed, external facts embedded in laws, spatial arrangements, and cultural norms (Berger & Luckmann, 1966, p. 49).
- **Internalization (objective → subjective reality):** Individuals born into this social world adopt these objectivated meanings through socialization. These shared understandings become part of their worldview,

shaping both behavior and identity (Berger & Luckmann, 1966, pp. 78–79). Through relationships with “significant others” (Berger & Luckmann, 1966, pp. 149–157), they absorb the “common-sense knowledge”—the intersubjectively shared norms and meanings that guide perception and action (Berger & Luckmann, 1966, p. 33).

These three processes—externalization, objectivation, and internalization—operate in a continuous cycle. Shared meanings are expressed, stabilized, and absorbed, then re-expressed and renegotiated in new interactions. Through this ongoing movement, social reality remains both stable and open to change (Berger & Luckmann, 1966, pp. 78, 149). Each process corresponds to a distinct layer of reality: intersubjective reality emerges through interaction, objective reality through the stabilization of meanings in durable forms, and subjective reality through the personal adoption of these shared meanings (Table 3.5).

In the context of landscape, this cyclical process implies that the ways people perceive, describe, and act upon landscapes are themselves products of ongoing social construction. What we consider landscape is never merely the physical environment but a synthesis of shared meanings, experiences, and cultural interpretations that have been externalized, objectivated, and internalized over time. Each individual perceives and values landscape differently, yet these personal understandings overlap within intersubjective spaces of meaning where communication allows for partial consensus and mutual recognition. Consequently, the landscape becomes both a material and a social field—a reflection of collective meaning-making in which stability and change coexist.

Table 3.5 Constructing subjective, objective, and intersubjective realities. Table by the author, based on Berger and Luckmann (1966, pp. 49–61).

Term	Meaning	Formation	Process
Subjective Reality	Personal understanding of the world	Created through absorbing shared meanings during socialization	Internalization: adopting objectivated meanings into one’s world-view
Objective Reality	Institutionalized norms, roles, and artifacts	Created through stabilizing meanings by embedding them in laws, institutions, and material structures	Objectivation: fixing shared meanings in durable forms (institutions, documents, laws, and material structures)
Intersubjective Reality	Shared “common sense” world	Created through interaction where individuals exchange, negotiate, and align meanings	Externalization: expressing and negotiating meanings with others

For Berger and Luckmann (1966, pp. 43–48), the primary arena where such meaning negotiation takes place is face-to-face interaction and communication. Here, the full richness of human expression—gestures, tone, and

responsiveness—enables participants to build shared understandings in real time. Language plays a central role in this process (Berger & Luckmann, 1966, pp. 49–61): it is the primary “system of vocal signs [...] of human society” (Berger & Luckmann, 1966, p. 51) and the medium through which abstract ideas are externalized and stabilized. Through language, meanings can be preserved in durable forms—such as plans, policies, or spatial designs—and transmitted across contexts.

This communicative process relies on what Berger and Luckmann (1966, p. 56) call a “stock of knowledge”: a socially distributed repository of typifications, assumptions, and shared meanings that guide interpretation. While unevenly distributed across cultures, professions, and communities, this stock forms the common ground for mutual understanding (Berger & Luckmann, 1966, pp. 57–61). Importantly, such knowledge is always intersubjective—co-created and shared, but never fixed or universal. It remains open to negotiation, reinterpretation, and contextual change.

In this sense, serious participatory landscape games simulate precisely this interpersonal, face-to-face situation of meaning negotiation. Within gameplay, participants bring their diverse and unevenly distributed stocks of knowledge—their personal experiences, observations, and forms of expertise—into a shared communicative space. Through discussion, exchange, and collective reflection, they express, challenge, and reconfigure their individual understandings of landscape. The games thus provide a structured environment in which the dynamic processes of externalization, objectivation, and internalization can unfold in real time, allowing participants to co-create and visualize shared landscape meanings.

3.3.3 The Evolution of Social Constructivism in Landscape Research

Building on the general foundations outlined in the previous section, this part traces how social constructivist ideas have been adapted within landscape research, culminating in the analytical models applied in this study. Over time, the concept of socially constructed meaning has been translated from a general sociological theory into a concrete methodological lens for understanding how landscapes are perceived, represented, and negotiated.

Early social constructivist influences in landscape studies—particularly within the Anglo-American tradition—focused on symbolic, ideological, and representational interpretations. W.G. Hoskins’ *The Making of the English Landscape* (2005) framed landscape as a product of historical and cultural processes, while Denis Cosgrove (1984, 1993) advanced the concept of symbolic landscapes as visual expressions of dominant ideologies. Greider and Garkovich’s (1994) influential article *Landscapes: The Social Construction of Nature and the Environment* marked a more explicit engagement with Berger and Luckmann’s (1966) sociology of knowledge, positioning landscapes as symbolic environments shaped by collective identity and shared values.

From the early 2000s onward, German-language scholarship—most notably the work of Olaf Kühne and colleagues—expanded and systematized this constructivist turn (Kook, 2009; Kühne, 2008a, 2015b, 2019b; Kühne et al., 2019; Micheel, 2012). Kühne’s writings analyze how landscapes are constructed across individual, social, and material dimensions, translating the abstract principles of social constructivism into an operational framework for both research and practice—particularly in relation to the implementation of the European Landscape Convention (e.g., Bruns & Kühne, 2013; Kühne, 2018b, 2019b; Kühne et al., 2019).

More recently, Kühne et al. (2020) have extended this perspective into game-based contexts, demonstrating that games not only convey landscape-related norms, values, and role expectations but also create arenas where such conventions can be tested, questioned, and renegotiated. The edited volume *The Social Construction of Landscapes in Games* (Edler et al., 2022) further illustrates that landscapes in games are actively shaped through mechanics, rules, narratives, and player interaction—not merely represented visually. This expansion links constructivist landscape theory directly to the communicative and interactive dimensions of game-based participation.

While Kühne’s framework has been critiqued for underemphasizing power relations and political conflict (Leibenath, 2014a), it remains one of the most comprehensive and analytically applicable models for examining how individuals and groups co-construct landscape meanings through interaction (Edler et al., 2022). This is particularly relevant for participatory approaches such as serious participatory landscape games, which rely on structured communication to explore and negotiate future landscapes.

The next section examines Kühne’s theoretical contributions in detail, beginning with his four-dimensional model of landscape construction. This model, together with his step-by-step account of meaning-making and his phases of landscape socialization, provides the analytical foundation for understanding how participatory games support the co-creation of landscape meaning.

3.3.4 Kühne’s Models for Constructing Landscape Meaning

Kühne’s social constructivist landscape theory is operationalized through three interrelated analytical models: the four dimensions of landscape construction (Kühne, 2008b, pp. 33–41; 2018b, Chapter 4; 2019b, pp. 7–10; Kühne et al., 2019, pp. 72–73), the step-by-step process of social construction (Kühne, 2015b, p. 29), and the phases of landscape socialization (Kühne, 2008a, 2019a; 2019b, pp. 61–64).

Together, these models provide a multi-layered framework for understanding how the process of landscape meaning-making unfolds across different levels of experience and interaction. The four-dimensional model offers a structural lens for analyzing the perspectives through which landscapes are perceived and interpreted—linking material, social, and individual viewpoints. The step-by-step model then focuses on how individuals construct and negotiate meaning within

these shared frameworks, while the model of landscape socialization explains how such meanings become collectively stabilized and transformed through the transmission of socially shared stocks of knowledge. In combination, they form the analytical foundation for understanding how small-group communication supports meaning-making within serious participatory landscape games.

3.3.4.1 Four Dimensions of Landscape Perception and Shaping

The four-dimensional model proposed by Kühne (2008b, pp. 33–41; 2018b, Chapter 4; 2019b, pp. 7–10; Kühne et al., 2019, pp. 72–73) offers a framework for understanding how participants in small-group settings communicate across different layers of landscape experience. It helps to identify which aspects of meaning-making are activated when people talk about, represent, or reinterpret landscapes—whether they refer to tangible spatial features, collective cultural meanings, or personal memories and emotions during playing serious participatory landscape games.

Grounded in interdisciplinary influences—including Löw's (2001) theory of spatial constitution, Bourdieu's (1991) insights on space and power, Popper's (1977) three-worlds theory, and Latour's (1996) Actor–Network Theory—the model conceptualizes the social construction of landscape meaning as a continuous, dynamic process in which four dimensions coexist and interact.

In this context, each dimension represents a distinct way of perceiving and understanding landscape:

1. **Collective dimension (Social Landscape):** Culturally shared meanings produced and reproduced through externalization, objectivation, and internalization (Berger & Luckmann, 1966). These meanings are embedded in cultural practices, values, and land-use histories (Flam, 2002; Hasse, 1997, 2000; Lehmann, 2001).
2. **Individual dimension (Individually Actualized Social Landscape):** Personal perceptions, interpretations, and emotional engagements formed within a shared cultural context but filtered through individual biographies—memories, social affiliations, and life experiences (Berg et al., 1998; Costonis, 1982; Greider & Garkovich, 1994, p. 1; Hahn, 2017; Howley, 2011; Ipsen, 2002, 2006; Kühne, 2006, 2008b, 2017; 2018b, p. 59; Lehmann, 2003; Mitchell, 2002; Peil & Sooväli, 2005; Saunders, 2012; Stotten, 2015; Turner, 1996; Wagner, 1997). Kühne (2018b, pp. 59–60) identifies seven interpretive layers—symbolic, aesthetic, cognitive, emotional, normative, functional, and economic—that together shape these subjective landscapes (Table 3.6).
3. **Material dimension (Physical Space):** The tangible, spatial, and physical conditions of a landscape—topography, vegetation, infrastructure, and other visible features (Miggelbrink, 2002, p. 341). These elements are shaped by human activities and, in turn, influence social organization (Löw, 2012, p. 106), materializing social priorities in physical space (Hayden, 1997, 2004; Marshall, 2007). In contemporary contexts, this concept also extends to virtual landscapes (Bertels, 1997; Stichweh, 2003).

4. **Appropriated physical landscape dimension (Appropriated Physical Landscape):** Physical spaces that have been synthesized into “landscape” through the attribution of meaning. What counts as part of a landscape (e.g., a chain of hills but not each individual stone) depends on social, cultural, or individual framing (Kühne, 2018b, pp. 64–67). Appropriation can occur at societal (widely shared), sub-societal (group-specific), or individual levels (Kühne, 2018b, p. 66) and changes over time as physical conditions, social interpretations, and values evolve (Békési, 2007; Corner, 1999; Henderson, 2003; Kühne, 2018a; Stotten, 2015).

This means that in serious participatory landscape games, players—through their interaction—may recall personal memories (individual dimension), debate shared cultural meanings (collective dimension), refer to tangible spatial features (material dimension), or assign new functions and values to specific sites (appropriated physical landscape dimension). This helps to understand how different forms of knowledge, experience, and perception intersect in the dialogue, revealing how the meaning of landscape emerges and evolves through communication.

Table 3.6 Seven interpretive layers of the landscape. Table by the author, based on Kühne (2018b, pp. 59–60).

Layer	Description
Symbolic	Cultural, historical, or personal associations that imbue landscapes with identity, heritage, and meaning (e.g., Stonehenge, the Carpathians).
Aesthetic	Judgments of beauty and visual appeal shaped by cultural norms and personal preferences, guiding landscape management and conservation.
Cognitive	Knowledge about the landscape—its features, functions, history, and significance—developed through socialization, education, and experience.
Emotional	Feelings evoked by landscapes, such as belonging, nostalgia, or awe, which shape one’s sense of place, cultural identity, and attitudes toward preservation.
Normative	Ethical or moral perspectives on how landscapes should be used or protected, often informed by symbolic, aesthetic, cognitive, and emotional interpretive layers.
Functional	Practical uses of landscapes—such as for recreation, agriculture, or habitation—shaping land-use decisions and policies based on utility.
Economic	Financial values attributed to landscapes, including tourism potential and property worth, which guide development priorities and conservation efforts.

3.3.4.2 The Five-Step Process Model of How Landscape Meanings Emerge in Small-Group Interaction

The five-step process-oriented model proposed by Kühne (2015b, p. 29) explains how landscape meanings emerge and evolve through interaction. It provides a framework for tracing how people perceive, interpret, share, and negotiate their understandings of landscape. In this research, it helps to understand

how small-group communication creates a cycle in which perception, interpretation, and feedback reshape both individual and collective understandings of landscape.

Although Kühne presents this model mainly in diagrammatic form and with limited textual explanation, it is interpreted here as shown in Fig. 3.9.

The process unfolds in five interconnected steps:

- **Step 1. The individual perceives stimuli from the Physical Space (Reiz):** Sensory perception of the material environment—its vegetation, landforms, water bodies, infrastructure, or buildings—is filtered through cultural background, emotions, memories, and social frameworks. Even at this first moment, perception is socially mediated.
- **Step 2. The individual forms a mental image (Bild):** Based on these perceptions, a mental image takes shape. It is structured by interpretive layers—symbolic, aesthetic, cognitive, emotional, normative, functional, and economic (see Table 3.5)—that draw from the Social Landscape, the shared reservoir of cultural meanings and narratives.
- **Step 3. The individual constructs the Individually Actualized Landscape:** Through further association, the mental image becomes personally meaningful. Biographical experiences, group affiliations, and memories filter social meanings into unique emotional and cognitive attachments—an Individually Actualized Landscape.
- **Step 4. The individual projects interpretations into the Social Landscape and receives feedback:** Interpretations are externalized through speech, drawing, spatial action, or other forms of expression. These enter social feedback loops (*Rückkopplung*), where others confirm, question, or modify them. This reciprocal exchange continuously reshapes both personal and shared understandings, making landscape construction a negotiated and dynamic process.
- **Step 5. The group stabilizes shared meanings, influencing the Appropriated Physical Landscape:** Meanings that gain broad acceptance through repeated projection and validation stabilize into collectively shared understandings. These guide social and material transformations—whether through building, preservation, celebration, or naming—embedding social meaning in the physical environment.

In serious participatory landscape games, this cyclical process can be observed as players move between perceiving, interpreting, and collectively reconstructing the landscape through communication. A player might respond to a visible feature on the game board (step 1), recall a personal memory (steps 2–3), and then share this view with others, inviting reactions or reinterpretations (step 4). Through such feedback loops, individual perceptions gradually align or diverge, leading to shared understandings that inform collective decisions about the future of the landscape (step 5).

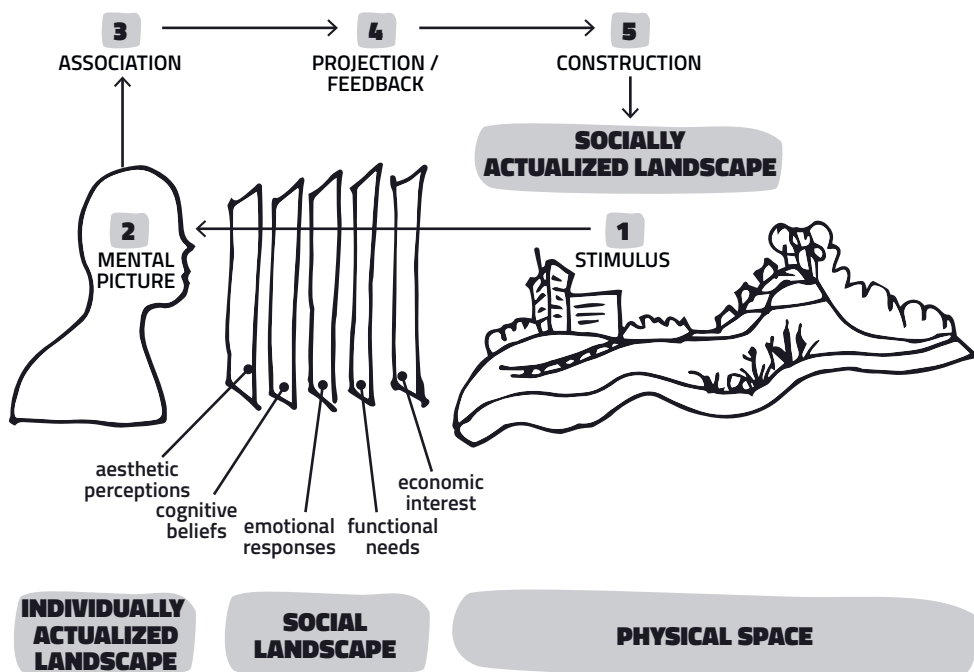


Fig. 3.9 The five-step process model of social construction of landscape meanings. Graphic by the author, adapted from Kühne (2015b, p. 29).

This perspective helps to explain how games structure communication and generate interaction, guiding small groups toward shared problem-solving and decision-making about landscape futures.

3.3.4.3 Phases of Landscape Socialization and Internalizing Meanings

The concept of landscape socialization explains how individuals acquire the cultural and cognitive frameworks through which they later perceive and interpret landscapes. In the context of small-group communication, this concept helps to understand why participants bring different assumptions, vocabularies, and value systems into a shared discussion—and how these prior experiences influence the meanings negotiated during interaction.

Drawing on social constructivist sociology (Berger & Luckmann, 1966), Kühne (2008a, 2019a; 2019b, pp. 61–64) identifies three phases of socialization—primary, secondary, and tertiary—that describe how people internalize symbolic values, aesthetic preferences, and functional expectations related to landscapes over time.

- **Primary landscape socialization** occurs in early childhood through everyday, informal interactions with family, community, and familiar surroundings. This stage forms what Kühne (2019b, p. 63) calls the “native regular landscape”—a deeply personal and emotionally charged sense of place rooted in sensory memories such as sounds, smells, and gestures

(Hunt, 2016; Hüppauf, 2007, p. 112; Tuan, 1974). It creates expectations of continuity and authenticity that often shape later emotional bonds with place (Felber Rufer, 2006; Micheel, 2012).

- **Secondary landscape socialization** develops through formal and informal education, media, and peer influence. It introduces standardized and often stereotypical representations of landscape (Kühne, 2019b, p. 63), reinforcing dominant aesthetic ideals (e.g., the picturesque countryside) and functional narratives (e.g., landscape as economic resource) (Kühne, 2015a, pp. 43–52; 2018b; Schenk, 2006). This phase establishes a culturally framed “common sense” of what counts as landscape.
- **Tertiary landscape socialization** arises through professional or disciplinary training in fields such as planning, architecture, or environmental science (Kühne, 2008a; Stotten, 2013). It embeds specialized concepts and critical perspectives that enable individuals to influence landscape discourses or reshape the Appropriated Physical Landscape through expert practice—for example, prioritizing ecological succession over visual uniformity (Hokeima, 2015; Kühne, 2008b; Leibenath, 2014b; Wojtkiewicz, 2015).

When communicating about landscape in serious participatory landscape games, these phases of socialization help explain why participants perceive and interpret landscape issues differently. Someone with primary socialization may respond to a landscape through memory and emotional attachment, while another with secondary socialization might draw on cultural or aesthetic models, and a participant with tertiary socialization could frame the discussion through technical or ecological criteria. Recognizing these differences reveals how negotiation processes reflect the diverse socialization histories that converge within the game environment.

3.3.5 Summary and Analytical Relevance: Constructing Landscape Meanings in Serious Participatory Landscape Games

Building on the European Landscape Convention’s definition of landscape as “an area, as perceived by people” (Council of Europe, 2000a, Article 1(a)), this theory frames landscape as a socially and communicatively produced phenomenon—one that takes shape through continuous processes of externalization, objectivation, and internalization, that is, through expressing meanings in communication with others, embedding them in shared symbols such as language and practices, and reabsorbing them into individual understanding (Berger & Luckmann, 1966). In this view, landscape meanings are not fixed or inherent but are constantly expressed, stabilized, and reabsorbed through social interaction. What people perceive as “landscape” depends not only on physical form but also on how shared values, memories, and practices are negotiated through communication.

Kühne’s (2015b, 2019b, 2019c) operationalized these principles for landscape research through three complementary models. The five-step process model

translates Berger and Luckmann's meaning-making cycle into a communicative sequence, illustrating how individuals, when engaging in small-group interaction, develop landscape meanings—from perceiving and interpreting physical space, through sharing and feedback, to the stabilization of shared understandings that can ultimately influence collective decisions or material outcomes (Kühne, 2015b, p. 29). The four-dimensional model shows that, when participants discuss landscapes, they may draw upon multiple, coexisting dimensions: the collective (shared cultural meanings), the individual (personal experiences and emotions), the material (the physical environment), and the appropriated physical (spaces endowed with social or symbolic significance) (Kühne, 2008b, pp. 33–41; 2018b, Chapter 4; 2019b, pp. 7–10; Kühne et al., 2019, pp. 72–73). Finally, the phases of landscape socialization explain why participants interpret landscapes differently (Kühne, 2008a, 2019a; 2019b, pp. 61–64): depending on whether their relationship to landscape is primarily shaped by primary, secondary, or tertiary socialization, individuals bring distinct cultural references, aesthetic ideals, and professional or disciplinary perspectives to the discussion.

Together, these models enable gameplay to be interpreted not merely as a participatory exercise but as a structured communicative setting where the social construction of landscape becomes observable, analyzable, and open to design.

This theoretical framework informs the analysis of the four **Urbanity** game prototypes and guides reflection on in-game communication along two analytical dimensions:

- **Processes of landscape meaning-making through communication:** Examines how participants perceive, interpret, and express their understandings of landscape through communicative processes, and how these are triggered, structured, or constrained by the game's design. It focuses on the dynamic cycle of externalization, feedback, and (partial) stabilization of meanings, following Kühne's (2015b, p. 29) process model and Berger and Luckmann's (1966) theory of social meaning construction through externalization, objectivation, and internalization.
- **Mediation of differentiated knowledge stocks:** Investigates how players' professional, cultural, and biographical backgrounds—formed through different phases of landscape socialization—are articulated, integrated, or filtered within gameplay (Berger & Luckmann, 1966, p. 56; Kühne, 2019b, pp. 61–64). The analysis explores how design and facilitation mediate these differentiated knowledge stocks, shaping which perspectives become visible or remain implicit.

Through these analytical lenses, the research connects the communicative practices observed in games with the participatory ideals of the European Landscape Convention, advancing both theoretical understanding and methodological application for studying how shared landscape meanings are co-created—or interrupted—within the intentionally designed communicative environments of serious participatory landscape games.

3.4 Communicative Action and the Deliberation of Landscape Futures in Serious Participatory Landscape Games

This section introduces the theory of communicative action (Habermas, 1984, 1987, 1990b) as the third component of the triangulated theoretical framework. The theory supports the European Landscape Convention's democratic vision by providing a framework for understanding participation as a coercion-free communication process, in which rational dialogue and argumentation enable participants to reach a mutual understanding of situations and a shared consensus on how to act upon them. Applied to serious participatory landscape games, this perspective interprets games as communication environments that can generate and structure interaction so that equality, reasoned deliberation, and consensus become possible—thus linking gameplay to the Convention's idea of “a collective democratic exercise whereby differences are accepted, common characteristics found, and operational compromises eventually reached” (Council of Europe, 2008, II.2.3.A).

The section proceeds as follows. Section 3.4.1 distinguishes communicative action from strategic action, followed by an explanation of rational argumentation and its validity claims (Section 3.4.2). It then examines how these processes are shaped by the lifeworld—participants' shared cultural and experiential background (Section 3.4.3)—and by the communicative roles and perspectives adopted during interaction (Section 3.4.4). The spectrum of agreement (Section 3.4.5) differentiates between superficial alignment and deeper consensus, while the conditions for communicative action and their analytical relevance (Sections 3.4.6–3.4.7) establish the criteria for assessing the deliberative quality of interaction in serious participatory landscape games.

3.4.1 Understanding Communicative Action and Strategic Action

Philosopher and sociologist Jürgen Habermas, a leading theorist of deliberative democracy and developer of the theory of communicative action, examines in his works the conditions under which modern societies can sustain rational and democratic dialogue and reach agreement on collective action. To introduce this theory, this study draws on two of his key works—*The Theory of Communicative Action* (Habermas, 1984) and *Moral Consciousness and Communicative Action* (Habermas, 1990b). At the core of this theory lies a distinction between two fundamental orientations of human interaction: communicative action and strategic action.

- **Communicative action** occurs when participants engage in dialogue with the primary aim of reaching mutual understanding. Rather than seeking to influence or manipulate, individuals exchange arguments, clarify meanings, and work toward agreement based on shared reasoning. Communication in this mode presupposes equality among participants and relies on reason, sincerity, and openness to critique (Habermas, 1984, pp. 86, 99).

- **Strategic action**, by contrast, uses language instrumentally to achieve personal or group objectives. Here, persuasion serves as a means to steer outcomes toward one's own advantage, often shaped by asymmetries of power, resources, or access to decision-making. While strategic action is common in political and institutional contexts, it undermines the deliberative quality of participation when it dominates interaction (Habermas, 1990b, p. 133).³

This distinction between communicative and strategic orientations is crucial for understanding how individuals relate to one another in the problem-solving and decision-making settings characteristic of serious participatory landscape games. From a Habermasian perspective, these games—when consciously designed to structure communication and generate interaction among players in accordance with the principles of communicative action—have the potential to create coercion-free environments in which participants engage in reasoning, question assumptions, and collectively define solutions rather than pursue strategic goals.

3.4.2 Validity Claims and Rational Argumentation as the Operative Mechanism of Communicative Action

As explained, in Habermas's theory, communicative action refers to interaction among individuals oriented toward mutual understanding through coercion-free dialogue, rather than persuasion or control, in order to coordinate their actions. In such interaction, each utterance carries implicit validity claims—expectations that what is said can be justified as (1) true, referring to facts about the objective world; (2) right, referring to the social world of norms, that is, shared rules, values, and expectations about what is acceptable or appropriate; and (3) sincere, referring to the authentic expression of the speaker's subjective world, that is, whether the speaker genuinely means what they say (Habermas, 1984, pp. 99–100). When these claims are questioned, communication shifts into rational argumentation—the reflective process of giving and examining reasons through which participants test and justify their statements (Habermas, 1984, pp. 10–22). Rational argumentation is thus the operative mechanism of communicative action, enabling mutual understanding to be continuously achieved and renewed through language.

Argumentation unfolds as participants—what Habermas calls communicative actors—present their claims, examine those of others, and respond to challenges (Habermas, 1984, p. 18). When a claim is accepted (the yes position), it

3 Habermas identifies three goal-oriented actions (Habermas, 1984, p. 285), whereby communicative action is only one of them. First, "instrumental action," which controls objects or processes without social interaction to achieve a specific goal. Second, "strategic action," which manipulates the views of others in social interaction to achieve goals. Finally, "communicative action" that uses language and dialogue as a medium to create mutual understanding between two or more people participating in the dialogue.

moves toward agreement. When it is rejected (the no position), disagreement arises in at least one of the three dimensions—truth, normative rightness, or sincerity—prompting further discussion to clarify facts, revisit norms, or test authenticity (Habermas, 1990b, pp. 136–137). This back-and-forth transforms argumentation into a learning process, as participants respond to one another's reasons, revise their positions, and move beyond initial assumptions (Habermas, 1984, p. 70).

Through such exchanges, communicative action becomes a process of collective reasoning and learning—a way of building what Habermas calls the “intersubjectivity of their lifeworld” (Habermas, 1984, p. 10): a shared and continually renewed space of meaning that integrates factual, normative, and experiential dimensions of communication. However, when traditions or institutional hierarchies predefine which claims are accepted without question, opportunities for such reflexivity are reduced: “the more cultural traditions predecide which validity claims, when, where, for what, from whom, and to whom must be accepted, the less the participants themselves have the possibility of making explicit and examining the potential grounds on which their yes/no positions are based” (Habermas, 1984, p. 70).

These principles mean that, in the designed communicative environments of serious participatory landscape games, small-group interaction can aim to achieve mutual understanding through language, coordinating participants' actions and decisions about the landscape. In this process, players continuously test three dimensions of validity: the truth of factual statements (e.g., “The landfill over in Greenfield Township occupies a space of 46 acres” (Webler, 1995, p. 42)); the rightness of normative proposals (e.g., “Operation of the landfill should be overseen by a committee of elected citizens” (Webler, 1995, p. 42)); and the sincerity of personal expressions (e.g., “I am concerned that the noise from the landfill will be unbearable” (Webler, 1995, p. 42)).

The design of these games can therefore play a decisive role: when structured to support rational argumentation, they can foster reasoned dialogue, encourage justification and critique, and help participants align their perspectives. Games that promote such deliberative exchanges enable communicative action to unfold—turning dialogue itself into a medium for reasoning together about how landscapes are understood, valued, and shaped.

3.4.3 The Lifeworld as the Cultural Foundation of Communicative Action

Human communication never takes place in a vacuum: every exchange of ideas and arguments is embedded in shared cultural meanings, traditions, and collective experiences. Habermas (1984, p. 330) conceptualizes this underlying horizon as the “lifeworld” (*Lebenswelt*)—the reservoir of interpretations, norms, and assumptions that people draw upon when they try to understand one another. These resources include language, values, and collective memories internalized through socialization (Habermas, 1984, pp. 69–71), forming

what he calls “unquestioned cultural givens” that orient interaction (Habermas, 1990b, p. 135).

In everyday communication, the lifeworld functions as a pre-understood background that allows people to interact without constantly clarifying assumptions (Habermas, 1990b, p. 136). When these background assumptions overlap, mutual understanding emerges more easily (Habermas, 1990b, p. 138); when they diverge—as in pluralistic or intercultural contexts—participants must make their assumptions explicit and negotiate meaning. The lifeworld is not static but continuously renewed through communicative action: every exchange of validity claims revisits and reshapes shared understandings across the factual, normative, and experiential dimensions of meaning (Habermas, 1984, p. 77; 1990b, p. 136; Popper & Eccles, 1977, p. 38). In this way, agreement rests simultaneously on provisional knowledge, normative accord, and mutual trust (Habermas, 1990b, p. 136).

In the context of serious participatory landscape games, this means that when games are designed as communicative environments that enable participants to exchange and test validity claims through rational argumentation, they provide a setting where the lifeworld becomes visible and open to reflexive renewal. During such interaction, players not only express and justify their own perspectives but also encounter others’ assumptions and cultural horizons, negotiating a shared understanding of the landscape. This process differs from the mechanisms described by social constructivist landscape theory: while the constructivist approach explains how individuals bring socially internalized knowledge stocks into communication—what they already know or take for granted about the landscape—the concept of the lifeworld focuses on how these taken-for-granted understandings are revisited, tested, and transformed through communicative action itself. In this way, games designed to support deliberative dialogue do not simply reflect participants’ pre-existing social realities; they also create conditions for those realities to be collectively reinterpreted and renewed.

3.4.4 Communicative Roles and Perspectives as the Structure of Communicative Action

In Habermas’s theory, communicative action does not unfold in an abstract space but through interaction among individuals who occupy distinct communicative roles. These roles—such as speaker, addressee, and bystander—shape how people contribute to, interpret, and evaluate dialogue (Habermas, 1990b, p. 135). Communicative actors are simultaneously products of their lifeworld—bringing with them socially and culturally embedded knowledge—and active participants who influence the development of the conversation through their speech acts. As speakers, they articulate positions and propose interpretations from a first-person perspective; as addressees, they respond to others from a second-person perspective; and as bystanders, they adopt a third-person perspective, assessing the coherence, fairness, or broader implications of the exchange.

Habermas further distinguishes between two overarching perspectives that communicative actors can adopt: (1) the participant perspective, in which they are directly engaged in dialogue and oriented toward understanding, and (2) the observer perspective, in which they maintain critical distance and reflect on whether the interaction upholds ethical and democratic standards (Habermas, 1990b, p. 135). The alternation between these perspectives allows participants to move fluidly between contributing, responding, and reflecting—an essential dynamic for maintaining communicative rationality.

In serious participatory landscape games, this perspective means shifting attention from in-game roles—those defined by the rules and objectives of the game—to the communicative roles that players take on during interaction. In-game roles may involve functional tasks, such as acting as a decision-maker or group representative expressing their own or their group's views, or fictional identities adopted through role-play, such as a resident, official, or advocate representing a specific interest. From a Habermasian standpoint, what matters is not the assigned role itself but how players communicate within it. When engaging in dialogue, players may adopt a participant perspective, actively taking on the communicative positions of speaker or addressee, or they may assume an observer perspective, acting as bystanders who reflect on the interaction rather than contributing directly. Recognizing this distinction between in-game and communicative roles clarifies how games structure communication—by guiding when and how players speak, listen, or observe—and thus how the conditions for communicative action can emerge within gameplay.

3.4.5 The Spectrum of Agreement as the Outcome of Communicative Action

Habermas (1984, pp. 286–287) distinguishes several qualitatively different forms of understanding and agreement—*Gleichgestimmtheit*, *Übereinstimmung*, *Verständigung*, *Einigung*, and *Einverständnis*—which represent increasing depths of communicative alignment. In this research, these forms are interpreted as a continuous “spectrum of agreement” that describes possible outcomes of communicative action, ranging from non-deliberative coordination to value-based consensus.

At the most superficial level lie two non-deliberative forms of alignment:

- **Gleichgestimmtheit (emotional resonance):** Moments when participants share a common mood, attitude, or sense of solidarity without articulating or testing the reasons for their alignment.
- **Übereinstimmung (concurrence):** Situations in which participants happen to hold similar opinions or preferences, but not as the result of reasoned dialogue or critical reflection.

While both forms can facilitate temporary coordination, they lack the rational justification and exchange of reasons that characterize communicative action.

Deeper levels of deliberation include three deliberative forms of agreement:

- **Verständigung (mutual understanding):** Participants actively engage in dialogue to clarify one another's perspectives, identify assumptions, and establish a shared interpretation of meaning. Even without reaching a concrete decision, they create a common frame of reference for continued reasoning and collaboration.
- **Einigung (practical agreement):** Participants align on a specific proposition, plan, or course of action through mutual justification and reasoned discussion—what Habermas refers to as *Zustimmung*, an acceptance grounded in argument rather than coercion or preference matching.
- **Einverständnis (value-based consensus):** The deepest form of deliberative alignment, achieved when participants not only agree on a decision but also share and endorse the values and reasoning behind it. At this level, deliberation transforms individual perspectives into a shared moral or ethical stance.

Understanding this progression clarifies how serious participatory landscape games may foster—or fall short of—deeper forms of agreement through their designed communicative environments. When games create conditions consistent with communicative action—ensuring equal participation, structuring opportunities for reason-giving, and supporting intersubjective validation—they are more likely to facilitate movement toward the deliberative end of the spectrum. Conversely, when communication is dominated by persuasion, competition, or predefined hierarchies, alignment tends to remain at the surface level of emotional resonance or concurrence. Recognizing these differences allows the analysis to assess how game design shapes the quality and depth of communicative action in practice.

3.4.6 Conditions for Communicative Action

For Habermas, communicative action—dialogue oriented toward mutual understanding rather than personal gain—depends on a set of underlying conditions that determine when communication can be considered fair, reasoned, and legitimate. These conditions define when participants can reach understanding through the “force of the better argument” (Habermas, 1990a, p. 89) rather than through persuasion or coercion.

Across his major works, Habermas formulates these conditions in slightly different ways. In *The Theory of Communicative Action* (Habermas, 1984, p. 25), he distinguishes three dimensions of argumentation: (1) the process of participation; (2) the procedures through which claims are justified and challenged;

and (3) the product, understood as the quality and depth of the agreement reached. In *Discourse Ethics* (Habermas, 1990a, pp. 87–89), written with legal philosopher Robert Alexy, these dimensions are reformulated as discourse-level, procedural-pragmatic, and logical-semantic presuppositions.

While the terminology differs, both converge on the same essentials: participation must be equitable, reasoning transparent, and outcomes coherent and meaningful. For analytical clarity, this study integrates these perspectives into three practical conditions of communicative action, directly synthesizing the two sources (see Table 3.7).

Together, these conditions translate Habermas’s philosophical framework into practical evaluative criteria. In serious participatory landscape games, they help determine whether communication approximates communicative action—that is, whether players interact as equals, justify claims through reasons, and reach agreements grounded in shared understanding rather than strategic advantage.

Table 3.7 Practical conditions of communicative action. Table by the author, based on Habermas (1984, p. 25; 1990a, pp. 87–89).

Aspect	Equitable Process	Reason-Giving Procedures	Coherence and Depth of Agreement
Synthesis of Theoretical Sources	<i>Argumentation as Process</i> (Habermas, 1984, p. 25) + <i>Discourse-Level Assumptions</i> (Habermas, 1990a, pp. 87–89)	<i>Argumentation as Procedure</i> (Habermas, 1984, p. 25) + <i>Procedural-Pragmatic Presuppositions</i> (Habermas, 1990a, pp. 87–89)	<i>Argumentation as Product</i> (Habermas, 1984, p. 25) + <i>Logical-Semantic Presuppositions</i> (Habermas, 1990a, pp. 87–89)
Focus and Core Idea	Focus on the equal conditions of the communicative process. All participants capable of speech and action may take part on equal terms, free from domination or coercion, allowing the unforced “force of the better argument” to prevail (Habermas, 1990a, p. 89). The goal of communication is mutual understanding, excluding strategic or self-interest-driven motivations (Habermas, 1984, p. 25).	Focus on the rules that structure communicative procedure. Argumentation suspends immediate pressures of action, creating a space where participants examine claims with reasons—and only with reasons (Habermas, 1990a, p. 87). Participants alternate between the roles of proponent and opponent in a “division of labour” (Habermas, 1984, p. 25), ensuring that each position is tested by the strongest possible arguments.	Focus on the results and products of communication. Agreements count as communicatively valid when they are logically sound and meaningful to all participants. Such consensus arises through intersubjective recognition—acceptance based on coherent reasoning rather than fatigue or conformity (Habermas, 1984, p. 25). Degrees of depth include <i>Verständigung</i> (mutual understanding), <i>Einigung</i> (practical agreement), and <i>Einverständnis</i> (value-based consensus) (Habermas, 1984, pp. 286–287).

Aspect	Equitable Process	Reason-Giving Procedures	Coherence and Depth of Agreement
Key Re-requirements (Habermas, 1984; 1990a)	Everyone may participate (Habermas, 1990a, p. 89). Anyone may question, assert, or express needs (Habermas, 1990a, p. 89). No one may be prevented from exercising these rights by internal (status, fear) or external (authority) constraints (Habermas, 1990a, p. 89).	Speakers assert only what they genuinely believe (Habermas, 1990a, p. 88). Anyone disputing a claim or norm not already under discussion must provide a reason for doing so (Habermas, 1990a, p. 88). Arguments must be coherent and reason-based (Habermas, 1984, p. 25). Contributions remain on topic (Habermas, 1984, p. 25). Speakers are accountable and open to critique (Habermas, 1984, p. 25).	No contradictions (Habermas, 1990a, p. 87). Terms and meanings used consistently (Habermas, 1990a, p. 87). Shared understanding of key concepts achieved (Habermas, 1990a, p. 87).
Implications for serious participatory landscape games	Game facilitation and design should ensure voice parity and equal participation.	Game facilitation and design (e.g., prompts, cards, debate phases) scaffold reasoning and encourage justification rather than persuasion.	Game facilitation and design leads to genuine consensus built through reasoned deliberation rather than conformity ranging from <i>Verständigung</i> (understanding) to <i>Einverständnis</i> (value-based consensus).

3.4.7 Summary and Analytical Relevance: Ensuring Equity, Reason-Giving, and Depth of Agreement

In this study, communicative action theory offers a framework for evaluating the deliberative quality of small-group communication within serious participatory landscape games—intentionally designed communication environments. It distinguishes communicative action, oriented toward mutual understanding, from strategic action, where language is used instrumentally for influence or control (Section 3.4.1; Habermas, 1984, 1987, 1990b).

Rational argumentation (Section 3.4.2) was presented as the operative mechanism through which understanding is achieved. Participants test and justify three types of validity claims—truth, normative rightness, and sincerity—and may revise their positions through reasoned dialogue. This process is shaped by the participants' lifeworld (Section 3.4.3), understood as the shared background of meanings that enables interpretation, and influenced by the communicative roles and perspectives that structure dialogue (Section 3.4.4). The spectrum of agreement (Section 3.4.5) distinguishes between surface-level alignment and deeper, value-based consensus.

The three conditions of communicative action—equitable process, reason-giving procedures, and coherence and depth of agreement (Section 3.4.6; Habermas, 1984, p. 25; 1990a, pp. 87–89)—thus serve as concrete analytical criteria for assessing whether and how communicative rationality emerges in serious participatory landscape games.

In this research, they provide the foundation for evaluating the communicative design of serious participatory landscape games: how far their structures and generated interactions enable equitable participation, reasoned exchange, and meaningful consensus.

- **Equitable process (process):** Are participation rules, turn-taking mechanisms, and facilitation strategies inclusive and fair?
- **Reason-giving procedures (procedure):** Do game structures encourage justification, questioning, and cooperative testing of claims?
- **Coherence and depth of agreement (outcome):** Do players reach outcomes that are logically consistent, intersubjectively meaningful, and free from coercion? What level of agreement do they achieve along the spectrum?

Through these analytical lenses, the study connects communicative practices observed in games with the democratic ideals of the European Landscape Convention, advancing both theoretical understanding and methodological application for assessing how games align with deliberative democracy and support rational argumentation and mutual understanding.

3.5 Conclusion

This section synthesizes the three theoretical perspectives into a unified framework for analyzing small-group communication in serious participatory landscape games. Together, they form a triangulated analytical model that links the structural organization of communication, the construction of meaning, and the evaluation of deliberative quality during gameplay.

1. **Structural-analytical perspective:** Duke's (1974; Duke & Geurts, 2003b) theory of games as intentionally designed communicative environments provides the structural foundation for analyzing how game design and facilitation organize communication and generate interaction around landscape-related problem-solving and decision-making. His visualization approach to tracing interaction patterns encourages closer examination of the relationships between game design, facilitation, and the communicative structures and interaction patterns produced by games. Building on this foundation, the present study extends Duke's approach by incorporating spatial and temporal dimensions from small-group communication research (Bavelas, 1948; Leavitt, 1949; Shaw, 1964, 1981a, 1981b), thereby clarifying how games structure communication patterns that enable collective reflection and collaborative decision-making.

2. **Meaning–constructive perspective:** Social constructivist landscape theory (Berger & Luckmann, 1966; Kühne, 2018b, 2019b, 2019c) introduces an interpretive dimension by examining how landscape meanings emerge and evolve through in-game communication. It foregrounds two complementary aspects: the processes through which participants articulate and negotiate landscape meanings, and the mediation of differentiated knowledge stocks shaped by socialization. Both aspects are structured and mediated by the game’s design and facilitation. This perspective links the structural organization of communication with the social construction of landscape, positioning games as consciously designed communicative environments in which individual viewpoints can be expressed, confronted, and, at times, aligned into shared cultural meanings.
3. **Deliberative–evaluative perspective:** Communicative action theory (Habermas, 1984, 1987, 1990b) introduces the normative dimension by specifying the democratic qualities of in-game small-group communication—equity, reason-giving, and mutual understanding—that determine whether interaction is fair, inclusive, and oriented toward agreement. In the context of gameplay, these qualities depend on how design and facilitation enable or constrain participants’ opportunities to justify claims, articulate critique, and reach shared understanding. This perspective thus provides evaluative criteria for assessing whether in-game communication fulfills the conditions of communicative action and approximates deliberative ideals, explicitly linking normative assessment to the procedural and design dimensions of communication.

Together, these three perspectives form a triangulated theoretical framework that integrates the structural–analytical, meaning–constructive, and deliberative–evaluative dimensions of small-group communication. This integration directly addresses the three research gaps identified in Chapter 1: it responds to the knowledge gap by clarifying how game design structures communicative interaction; it addresses the methodological gap by providing a basis for the visual and analytical representation of communication across time and space; and it engages the theoretical gap by connecting games to the deliberative ideals of the European Landscape Convention. In doing so, the framework shows how games can foster shared meaning, enable the acceptance of differences, and support negotiated compromise.

In this study, the framework is operationalized through the empirical case of **Urbanity** (Szilágyi-Nagy & Tóth, 2017; Tóth & Szilágyi-Nagy, 2021)—a serious participatory landscape game examined as an instrumental case study and introduced in the next chapter. **Urbanity** serves both as an experimental setting for developing the temporal–spatial visual analysis method and as a testbed for applying the theoretical framings presented in this chapter. Through this combined methodological and empirical application, the research explores how game design structures communication, generates interaction, and supports the communicative co-construction of landscapes meanings envisioned by the European Landscape Convention.

4 Methodology

This chapter presents the methodological framework used to investigate how analogue and hybrid serious participatory landscape games—which bring together 3 to 20 participants in face-to-face settings to deliberate, co-decide, or problem-solve around landscape issues (Szilágyi-Nagy, 2022)—function as intentionally designed communicative environments. It explores how such games structure and generate interaction, enable the co-construction of landscape meanings, and support inclusive, democratic decision-making processes.

Building on the triangulated theoretical framework introduced in Chapter 3, this methodology addresses the theoretical, methodological, and empirical gaps identified in earlier chapters (see Sections 1.2 and 2.4), and responds to the research aims and questions summarized in Table 1.1 and Table 1.2. Section 4.1 outlines the qualitative orientation of the research and explains the rationale for using a case study methodology to examine small-group communication in serious participatory landscape games. Section 4.2 defines the case structure, introducing four prototypes of the *Urbanity* game as collective case units through which different communicative environments are analyzed. Section 4.3 details the empirical data collection process, based on a structured archive from the development of *Urbanity*. Section 4.4 describes the analytical strategy, combining visual analysis, thematic coding, and theoretical reflection. Section 4.5 addresses methodological limitations and reflexive considerations, while Section 4.6 summarizes the approach and connects it to the empirical analysis in Part IV: Analysis.

4.1 Qualitative Orientation and Case Study Strategy

This research adopts a qualitative orientation to explore the structural, meaning-related, and deliberative qualities of in-game small-group communication within serious participatory landscape games. rather than measuring outcomes or quantifying participation, the study seeks to understand how interaction, meaning-making, and decision-making emerge through language and behavior in this specific communicative context. A qualitative approach is thus particularly suited to exploring these interpretive and processual dimensions of human interaction (Creswell, 2007, pp. 7–8).

Among the various traditions within qualitative inquiry—such as narrative inquiry (Clandinin, 2007; Clandinin et al., 2016); phenomenology (Schütz, 1967), grounded theory (Charmaz, 2000, 2008, 2014; Corbin & Strauss, 1998; Glaser & Strauss, 1967; Strauss & Corbin, 1994), ethnography (Atkinson et al., 2001; Fetterman, 2010), participatory action research (Kindon et al., 2007; McIntyre, 2008), and discourse analysis (Gee, 2014; Tannen et al., 2015)—this

study employs case study research as the most appropriate methodology for examining the context-dependent, complex social phenomena of small-group communication in games. Case studies enable an in-depth, multi-perspective analysis of situations where the boundaries between a social process and its environment are blurred and where understanding process dynamics is essential (Creswell, 2007; Schwandt & Gates, 2018; Stake, 1995; Yin, 2018).

In landscape research, case study methods have proven effective in exploring participatory practices, particularly those aligned with the European Landscape Convention (Jones & Stenseke, 2011a). In game studies, they have been used to examine games as tools for communication, decision-making, and structured interaction (Abt, 1987; Duke & Geurts, 2003b; Sanoff, 1979; Tan, 2014). This convergence makes case study research an appropriate methodological bridge between participatory landscape governance and game design.

More specifically, this research follows an instrumental case study strategy (Stake, 1995, p. 6), where the primary goal is not to understand the case for its own sake, but to use it as a vehicle to explore broader theoretical and practical questions. The empirical case investigated—described in detail in the next section—serves as a means to examine various aspects of small-group communication in serious participatory landscape games, including its structure, the co-construction of meaning, and the deliberative quality of interaction.

4.2 Case Definition and Structure: Prototypes as Collective Case Units

In case study research, a central methodological task is to define the case—that is, the specific instance or unit of analysis through which broader questions are examined. A case may refer to a person, event, organization, process, or setting (Schwandt & Gates, 2018, p. 600). In the present study, each case is defined as a single prototype: a working version of a game developed to test, refine, and evaluate specific research questions (Fullerton, 2019, p. 203).

The prototypes analyzed in this study come from the serious participatory landscape game *Urbanity*—a Hungarian analog street debate game developed by the kultúrAktív Association between 2014 and 2015 (Szilágyi-Nagy & Tóth, 2017; Tóth & Szilágyi-Nagy, 2021). *Urbanity* was designed as a face-to-face communication tool to support critical thinking and debate on everyday urban landscape issues. Over the course of its early development, the game evolved through several prototype iterations, each modifying rules, roles, and spatial arrangements to address different communicative goals.

This study focuses on four prototypes developed during the first year of the game's design process (November 2014 – December 2015). These were selected because they represent analytically valuable variations that illustrate how different design choices shape small-group communication (Creswell, 2007, p. 76; Stake, 1995, p. 4). Each prototype was designed to explore a specific communicative mechanism or challenge (see Section 4.4.1 for selection criteria):

- **Clash**, a fast-paced, stance-driven format characterized by *opinion clash* through repeated pair encounters.
- **Parliament**, a deliberative format structured around *open debate* model with representative roles, *defense speech* and *voting*.
- **Tactic Dice**, a competitive format combining *opinion duel*, randomness, and shifting alliances.
- **Tactic Card**, a procedurally organized format based on *structured debate*, in which players activate and frame discussions through debate cards.

To enable comparative insight, the study adopts a collective instrumental case design (Stake, 1995, p. 4), in which the four prototypes are examined together to investigate the broader phenomenon of how serious participatory landscape games structure interaction, support the co-construction of meaning, and foster inclusive group decision-making through intentional design.

These prototypes are analyzed both individually (within-case analysis, see Chapters 6–9) and comparatively (cross-case analysis, see Chapters 10–12). The within-case analysis examines how each prototype structures communication and interaction, facilitates meaning-making, and supports group decision-making. The cross-case analysis identifies recurring themes, patterns, and design principles across the different formats. This dual approach allows the study to distinguish prototype-specific effects from more generalizable insights into communicative design in participatory games.

Rather than treating **Urbanity** as a single, unified case, the study uses its prototype evolution as a structured empirical field through which different communicative environments can be observed, compared, and interpreted. Detailed descriptions of gameplay mechanics, spatial configurations, and facilitation strategies for each prototype are presented in Chapter 5.

4.3 Data Collection

The empirical foundation of this collective instrumental case study is a structured archive based on data from the first year (2014–2015) of **Urbanity**'s development. As an active member of the design team, I was involved both in the creation of the game and in the systematic documentation of its iterative design process. While the original materials were produced for practical purposes—such as tracking design decisions, recording playtest results, and communicating outcomes to external audiences—they were later reorganized and reinterpreted into a structured research archive.

Data collection followed a multi-source strategy, drawing on diverse materials—including meeting records, field notes, internal emails, and publicly accessible outputs—which were subsequently systematized into an Excel-based dataset to support analysis. Table 4.1 summarizes the source types, their definitions, and the referencing conventions used throughout the dissertation.

Table 4.1 Sources comprising the data archive and their referencing conventions. Table by the author.

Item	Definition	Referencing Convention
Game development workshop records	Meeting notes and photographs capturing key design decisions, iterative changes, and gameplay instructions	Prefix "M" (Minutes) + workshop sequence no. + date (YYYYMMDD). Example: M6_20150124.
Play event documentation	Field notes, occasional photographs, and player questionnaires capturing settings, participant interaction, and audience reception	Prefix "T" (Test session) + sequence no. + date (YYYYMMDD). Example: T2_20150418.
Internal correspondence	Email threads reflecting design thinking, planning, and feedback	Prefix "E" + date of first message (YYYYMMDD). Multiple threads on the same date add letters. Example: E_20141112a)
Public-facing materials	Presentation texts, slides, blog posts, published articles, radio interviews	Cited by title and publication date; full reference in bibliography.

To prepare this archive for research, I transcribed audio materials where available and organized all documents into Excel-based databases. These included: (1) a chronological development log, (2) a registry of internal correspondence, and (3) thematic indexes linked to each prototype.

This process aligns with the principle of data triangulation, which strengthens validity by drawing on multiple sources across different contexts and timeframes (Denzin, 2017, Chapter 12). Its longitudinal scope—covering more than a year of iterative development—provides a rich basis for understanding how *Urbanity* evolved through iterative design (Creswell & Creswell, 2018, p. 327).

This structured archive enabled the reconstruction of the game's development process and provided the empirical foundation for the two cycles of analysis described in Section 4.4. These comprised:

- identifying key phases in the development process and selecting prototypes for case analysis; and
- conducting within-case and cross-case analyses using the visual, thematic, and theoretical framework developed in this research.

4.4 Data Analysis

The analysis of the structured archive created from *Urbanity*'s first-year development (Section 4.3) unfolded in two sequential cycles.

4.4.1 Cycle 1: Identifying Development Phases and Selecting Prototypes

The first data analysis cycle reconstructed the game's first year of development by reviewing workshop records, playtest documentation, internal

correspondence, and public materials between November 2014 and December 2015. Based on this review, five distinct development phases were identified (Table 4.2). Each phase was characterized by a relatively stable composition of the design team, clearly defined objectives, and the creation and testing of one or more game prototypes.

From these phases, four prototypes—*Clash*, *Parliament*, *Tactic Dice*, and *Tactic Card*—were selected for detailed case analysis. Each was chosen because it marked a significant moment in the design process, responded to a specific communicative challenge, and introduced a distinct interaction dynamic. These four are the focus of the within-case (Chapters 6–9) and cross-case analysis (Chapters 10–12) discussed in the following section

Table 4.2 Development phases of *Urbanity* and corresponding prototypes. Table by the author.

Phase	Timeframe	Key Features of the Phase	Proto- type Tested
Preparation	Nov 2014 – early 2015	Early ideation and project	–
Phase I	Early 2015	Initial goals articulated; first playtests	<i>Clash</i>
Phase II	Spring 2015	Expanded design ideas; OFF-Biennale tests	<i>Parlia- ment</i>
Phase III	Middle 2015	Competitive elements introduced; faster pace	<i>Tactic Dice</i>
Phase IV	Late 2015	Refinement; player-driven topic selection	<i>Tactic Card</i>

4.4.2 Cycle 2: Within-Case and Cross-Case Analysis

The second analytic cycle examined communication dynamics in the four selected prototypes using three complementary methods: visual analysis, thematic analysis, and theoretical reflection (Table 4.3). This dual-level process—within-case analysis followed by cross-case comparison—enabled both depth and generalizability in interpreting how game design structures interaction.

Table 4.3 Analytical components of the second analysis cycle. Table by the author.

Analytical Component	Focus	Within-case analysis	Cross-case analysis
Visual Analysis	Temporal structure and spatial-material context of gameplay interaction	Visual analysis of gameplay and its communication steps (Chapters 6–9)	<i>Communication Pattern Analysis Method</i> (Chapter 11)

Analytical Component	Focus	Within-case analysis	Cross-case analysis
Thematic Analysis	Recurring design and facilitation factors influencing communication	Identification of design and facilitation elements shaping individual communication steps (Chapters 6–9)	<i>Game Design Catalogue and Facilitation Guide</i> (Chapter 10)
Theoretical Reflection	Interpretation of interaction through social constructivist landscape theory and communicative action theory	Meaning-making and deliberation in gameplay contexts (Chapters 6–9)	Theoretical framework of serious participatory landscape games as communicative environments for the social construction of landscape meaning and the enactment of communicative action (Chapter 12)

This combined approach allowed for an in-depth understanding of each prototype (Chapters 6–9), while the cross-case analysis (Chapters 10–12) revealed broader communicative patterns, design and facilitation principles, and the theoretical framing of serious participatory landscape games as communicative environments—findings applicable beyond the specific case of *Urbanity*.

4.4.2.1 Visual Analysis: Depicting Communication Structure and Interaction Patterns in Time and Space

The first analytic method focuses on the structural organization of communication in serious participatory landscape games. It applies Duke's (1974; Duke & Geurts, 2003b) theory of games as communicative environments, conceptualizing gameplay as a spatial and temporal arrangement that structures who interacts with whom, when, and under what conditions.

This visual analysis traces the configuration and rhythm of small-group communication as it unfolds within the play environment. Building on the visual motif library introduced in Section 3.2.5, the analysis developed in this study seeks to reconstruct the full communication process within each *Urbanity* prototype (see Sections 6.3, 7.3, 8.3, 9.3). The diagrams trace how gameplay structures communication step by step over time, while also representing the spatial and material contexts in which interaction occurs, including proximity, territorial behavior, and the use of physical artefacts. This temporal–spatial analysis provides the foundation for the within-case analysis by treating each prototype as a distinct communicative environment.

Over the course of the analysis, the visual system itself evolved: early experimental diagrams of *Clash* were refined through the analysis of later prototypes, gradually solidifying into a visual language with the potential to map small-group communication in other serious participatory landscape games. the cross-case synthesis (Chapter 11) builds on these representations to trace how successive design iterations modified the communicative structure—progressing from simple dyadic interactions toward more complex, multi-party

deliberations—and to introduce the elements of the *Communication Pattern Analysis Method*.

The visual analyses serves dual functions in this research. Analytically, it re-constructs how small-group communication is structured, visualized, and mediated through game design and facilitation. Conceptually, they provide interpretive access to the processes of meaning-making and deliberation that are examined in the subsequent theoretical reflection to illuminate how structure and interaction jointly shape the dynamics of shared understanding.

4.4.2.2 Thematic Analysis: Identifying Game Design and Facilitation Factors That Shape Communication

The second analytic method, thematic analysis, complements the visual mapping by identifying the factors and facilitation tasks that influence small-group communication during gameplay. The analysis focused on elements such as rule systems, scoring mechanisms, spatial layouts, and facilitation strategies that shape interaction patterns and overall communicative dynamics. By examining how these structures operate in practice, the thematic analysis helps explain why particular interaction patterns emerge and how they function within small groups.

Rather than applying a fixed coding scheme, the analysis followed an inductive and iterative process, drawing on grounded theory traditions (Charmaz, 2000, 2008, 2014; Glaser & Strauss, 1967; Saldaña, 2013; Strauss & Corbin, 1994). The coding process unfolded in four stages: corpus familiarization, open coding, constant comparison, and category development. Insights were generated through triangulation of gameplay observation, visual analysis, and player reflections, supported by the theoretical framework developed in Chapter 3.

The coding proceeded prototype by prototype, with each case contributing new themes (see Sections 6.4, 7.4, 8.4, 9.4). Some factors recurred across multiple prototypes, revealing different effects depending on changes in design. Others were unique to individual formats—such as the influence of randomness in *Tactic Dice*, or the formal debate structure in *Parliament*—and disappeared when those mechanics were removed or transformed. The richness of available data also influenced the depth of analysis: *Tactic Dice* and *Tactic Card*, for example, included recorded player feedback, allowing for deeper insight into how participants experienced and interpreted the gameplay.

In the final stage, themes were consolidated and grouped into two main analytical categories: game design factors and facilitation factors. These findings form the basis of the cross-case synthesis in Chapter 10, where the most influential patterns are presented in two practical outputs: the *Game Design Catalogue* (Section 10.1), which outlines key design considerations for supporting communication, and the *Facilitation Guide* (Section 10.2), which highlights strategies for enabling communication-centered facilitation in serious participatory landscape games.

The thematic analysis plays both an analytical and a conceptual role. It reveals what factors contributed to the structure and pattern of the prototypes, and reveals the experiential and procedural dimensions through which these conditions generate meaning, interaction, and learning.

4.4.2.3 Theoretical Reflection: Interpreting Meaning-Making and Deliberative Quality in Gameplay

The third analytic method applied in this analytic cycle is theoretical reflection, which interprets observed communication patterns through the lenses of social constructivist landscape theory and communicative action theory. These frameworks allow the empirical material to be understood not merely as interaction, but as structured communicative processes through which landscape meanings are constructed and democratic qualities can be evaluated.

The analysis builds on the theoretical model developed in Chapter 3 and is structured around two complementary dimensions:

1. **Meaning–constructive perspective (social constructivist landscape theory):** Based on Berger and Luckmann (1966) and Kühne (2018b, 2019b, 2019c), this perspective examines how landscape meanings emerge and evolve through communication. For the purposes of analysis, it focuses on two analytically distinct but interrelated points:
 - **Processes of landscape meaning-making through communication:** How participants perceive, interpret, and express landscape meanings in communicative interaction, and how these processes are triggered, structured, or constrained by the game's design and facilitation (Berger & Luckmann, 1966; Kühne, 2015b, p. 29).
 - **Mediation of differentiated knowledge stocks:** How players' professional, cultural, and biographical backgrounds—formed through different phases of landscape socialization—are articulated, integrated, or filtered within gameplay, and how design and facilitation mediate which perspectives become visible or remain implicit (Berger & Luckmann, 1966, p. 56; Kühne, 2019b, pp. 61–64).
2. **Deliberative–evaluative perspective (communicative action theory):** Drawing on Habermas (1984, 1987, 1990b), this perspective evaluates how in-game communication approximates the normative conditions of communicative action and the democratic ideals promoted by the European Landscape Convention. The analysis proceeds along three evaluative criteria:
 - **Equitable participation (participation):** Whether interaction rules, turn-taking systems, and facilitation practices ensure voice parity and inclusive dialogue.
 - **Reason-giving procedures (procedure):** Whether the game structure supports justification and critique, and whether participants engage with validity claims of truth, normative rightness, and sincerity.
 - **Coherence and depth of agreement (outcome):** Whether agreement is achieved—through voting, persuasion, or deliberation—and the extent to which it reflects rational convergence on shared meanings.

These reflections were conducted both within individual prototypes and comparatively across cases (Chapter 12). Taken together, this dual perspective

enables a deeper understanding of how gameplay environments foster or constrain shared meaning-making and deliberative quality. At the same time, it provides the basis for the final theoretical framing of serious participatory landscape games as intentionally designed communicative environments in which game design and facilitation actively shape both meaning-making processes and the deliberative quality of interaction.

4.5 Strengths and Limitations of the Methodology

This study offers an in-depth, multi-perspective investigation of small-group communication in serious participatory landscape games by combining archival analysis, visual mapping, thematic coding, and theoretical reflection. A key strength of this approach lies in its multi-layered triangulation (Denzin, 2017, Chapter 12), understood as the integration of multiple data sources, analytical methods, and theoretical perspectives to enhance the credibility and interpretive richness of qualitative research.

Specifically, the study employs data triangulation, drawing on archival materials from different contexts and moments in the game's iterative development to capture varied perspectives over time; method triangulation, combining visual, thematic, and theoretical analyses to examine communication through complementary methodological lenses; and theoretical triangulation, interpreting findings through the three perspectives introduced in Chapter 3—structural-analytical, meaning-constructive, and deliberative-evaluative—which together provide structural, interpretive, and normative viewpoints.

Together, these three levels of triangulation form a coherent framework for understanding how design and facilitation shape interaction, meaning-making, and the deliberative harmonization of actions within serious participatory landscape games. However, several limitations must also be acknowledged.

First, the dataset was archival, consisting mainly of materials—such as workshop notes, playtest records, and team communications—created for design purposes rather than for research. As a result, some aspects of interaction were not documented as systematically as they might have been in a purpose-built study. My dual role as participant and observer partly offset this limitation: being directly involved in the development process enabled me to recall and reconstruct events not fully captured in the archive. This privileged access, however, required sustained reflexivity to maintain analytic rigor and avoid bias.

Second, the temporal distance—nearly a decade between the events and their analysis—limited opportunities to generate new observational data. Pandemic-related restrictions further reduced the possibility of re-staging or conducting follow-up playtests. To mitigate this, I relied extensively on contemporaneous reflections, blog posts, and internal communications, which preserved many details of communicative interaction and design reasoning.

Third, the findings reflect the specific cultural and political context of Hungarian society. While this limits direct generalization, it also grounds the study

in a rich, situated case from which transferable design principles can be drawn. The resulting visual analysis method, *Game Design Catalogue*, and *Facilitation Guide* are intended for adaptation in other cultural and planning contexts, supporting the broader aims of the European Landscape Convention.

Fourth, language and translation considerations also shaped the methodological process. Many original quotations were in Hungarian. Following Younas et al. (2022), translations prioritized preserving meaning without interpretive distortion. Each quotation appears in English in the main text, with the original Hungarian provided in footnotes. This bilingual approach supports transparency, preserves the authenticity of participants' voices, and ensures that subtle nuances in meaning are not lost.

Fifth, researcher positionality constitutes another important factor. As a member of the **Urbanity** development team, I occupied a dual role in this research as both designer-practitioner and academic investigator. This insider position enabled a nuanced understanding of the game's evolution, context, and communicative mechanisms. While such proximity to the process may introduce subjectivity, it also deepened insight into the motivations, challenges, and iterative choices that shaped **Urbanity**'s development. This reflexive stance aligns with qualitative traditions that emphasize researcher positionality and the value of embedded practice in producing contextually grounded knowledge.

Sixth, ethical considerations and analytical integrity were central to handling the primary materials. When presenting opinions, decisions, or discussions from emails, media appearances, or workshop documents, I omit individual names to focus on collective reasoning within the design team. Selected quotations represent key moments in evolving discussions and are cited with their corresponding source references. I also recognize that my own professional judgments, research questions, and worldview have influenced data selection, analysis, and presentation.

By openly addressing these limitations and integrating mitigation strategies into the research process, the study maintains its contribution to participatory landscape governance, and communication-centered game design, as well as to the evolving use of serious participatory landscape games to support the co-construction of meaning, small-group decision-making, and mutual understanding in line with the public participation vision of the European Landscape Convention.

4.6 Summary of the Methodology

This study investigates how serious participatory landscape games, understood as intentionally designed environments for guiding small-group communication, structure interaction, support the social construction of landscape meanings, and foster deliberative and inclusive decision-making in line with the European Landscape Convention. Guided by three interrelated aims—understanding how game design and facilitation shape the structure and dynamics of communication, developing a visual method for analyzing meaning-making

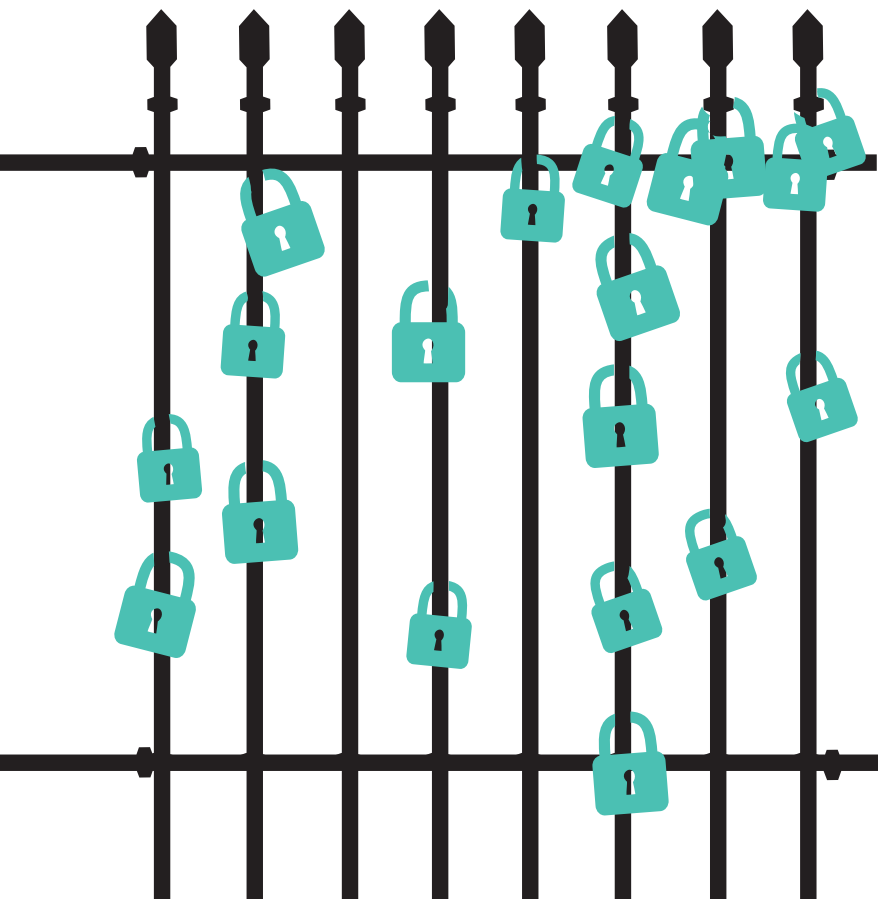
processes during gameplay, and interpreting communicative and deliberative qualities through theoretical lenses—the research adopts a qualitative, instrumental, and collective case study design (Stake, 1995, p. 6).

Focusing on **Urbanity**, an analogue, dialogue-based game developed in Budapest (Tóth & Szilágyi-Nagy, 2021), the study analyzes four prototypes created between 2014 and 2015. Each prototype was examined through three complementary methodological steps:

- visual analysis of temporal and spatial communication patterns;
- thematic analysis of development records to identify design elements and facilitation strategies; and
- theoretical reflection drawing on social constructivist landscape theory and communicative action theory.

This multi-layered triangulation of data, methods, and theory integrates structural, contextual, and normative perspectives, resulting in three interlinked methodological outcomes. First, the visual analysis produced the *Communication Pattern Analysis Method*, a systematic tool for mapping how communication unfolds in time and space during gameplay. Second, the thematic analysis identified key design and facilitation factors shaping interaction, which were synthesized into two applied outputs: the *Game Design Catalogue* and the *Facilitation Guide*, both intended to support the design and facilitation of participatory games. Finally, the theoretical reflection led to the formulation of an integrated conceptual framework that positions serious participatory landscape games as communicative environments—social arenas in which landscape meanings are co-constructed and collective action can emerge through reasoned dialogue.

Together, these elements establish a coherent methodological foundation for analyzing and designing serious participatory landscape games that advance the communicative and democratic ideals of the European Landscape Convention. In the next part of the dissertation (Part IV: Analysis), this framework is applied to the four **Urbanity** prototypes, contextualized within Hungary's evolving landscape governance milieu.



Part IV. **Analysis**

5

Urbanity: A Serious Participatory Landscape Game for Democratic Dialogue in Budapest's Urban Spaces

Having established the theoretical and methodological framework for examining serious participatory landscape games as communicative environments, this part turns to the empirical analysis. It introduces **Urbanity**—a street debate game developed by kultúrAktív in 2014–2015—and situates it within Hungary's participatory traditions, landscape governance practices, and Budapest's civic milieu. Developed in response to a shrinking institutional space for public dialogue, **Urbanity** offers a low-threshold, face-to-face format for discussing everyday urban landscape issues in line with the participatory vision of the European Landscape Convention.

Section 5.1 outlines the socio-political, legal, and cultural context of participation in Hungary, tracing how shifting governance structures have shaped civic dialogue and the emergence of participatory practices. Section 5.2 focuses on Budapest in 2014–2015, presenting municipal experiments, civil-society initiatives, and the rise of playful, game-based approaches that created fertile ground for **Urbanity**'s development. Section 5.3 introduces the game's concept, mechanics, and successive adaptations, presenting the four early prototypes—**Clash**, **Parliament**, **Tactic Dice**, and **Tactic Card**—that form the empirical foundation of this analysis. Finally, Section 5.4 provides a concise reading guide for the four case studies, referring back to Chapter 4 for methodological detail and outlining the analytical structure applied consistently across prototypes.

Together, these sections establish the empirical basis for the visual, thematic, and theoretical analyses that follow, linking **Urbanity**'s design and facilitation practices to the study's broader investigation of small-group communication, meaning-making, and deliberative quality in participatory landscape governance.

5.1 Political Structures and Traditions of Participation in Hungary

Hungary's evolving political landscape has profoundly shaped the opportunities and constraints for civic participation in environmental and landscape governance. Understanding this trajectory—spanning the transition from state socialism to the current illiberal democracy—is essential for situating bottom-up initiatives such as **Urbanity**, which seek to foster civic dialogue where institutional channels are narrowing.

5.1.1 From State Socialism to Illiberal Democracy

Hungary's post-war order, defined by the 1949 Constitution (Act XX) modelled on the 1936 Soviet Constitution, established a one-party state with a centrally planned economy and total state control over public life. The 1972 revision introduced modest economic reforms, yet political power remained concentrated in the Hungarian Socialist Workers' Party (Csink & Fröhlich, 2020). Opportunities for citizen input—especially on landscape matters—were effectively absent.

From the mid-1950s, cracks began to appear in the rigid socialist system. The 1956 Uprising against Soviet control, though violently suppressed, revealed deep public discontent. Under János Kádár's "goulash communism" (mid-1960s to 1980s), limited economic reforms and improved living standards fostered consumerism and what later became known as "refrigerator socialism." This period was often recalled with nostalgia after the 1989 regime change, when the one-party state was replaced by a multi-party parliamentary democracy (Bérend, 1996; Kornai, 1992; Valuch, 2001a, 2001b, 2013). Constitutional reforms in 1989 guaranteed freedoms of speech, assembly, and association (Government of Hungary, 1989) and were followed by market liberalization.

Hungary's 2004 accession to the European Union aimed to consolidate liberal-democratic norms, yet economic hardship, widening regional inequalities, and political disillusionment gradually eroded public trust (Ágh, 2013; Bozóki, 2011, February; Kovács & Zentai, 2012). The 2008 global financial crisis provided fertile ground for political realignment. In 2010, Fidesz secured a two-thirds parliamentary majority, enabling the unilateral adoption of the Fundamental Law (Government of Hungary, 2011d), which replaced the 1949 Constitution and has since been repeatedly amended (Csink & Fröhlich, 2013, 2020). These reforms centralized power, curtailed judicial independence, and narrowed spaces for public debate—particularly media freedom, civil liberties, and participatory rights (Bánkuti et al., 2012, pp. 138–139; Bozóki, 2013; Krekó & Enyedi, 2018; Rupnik, 2012; Scott, 2024). Prime Minister Viktor Orbán openly promoted an "illiberal democracy" as an alternative to liberal pluralism (Ágh, 2013; 2014, p. 16; 2022, p. 6; Bánkuti et al., 2012; Bozóki, 2013; Jenne & Mudde, 2012; Krekó & Enyedi, 2018; Rupnik, 2012). Under Orbán, Hungary underwent what Ágh (2022) describes as a three-phase shift—de-democratization (2010), autocratization (2014), and de-Europeanization (2018)—each marked by expanding executive control and shrinking civic space (Csányi, 2022).

As formal arenas for public deliberation contracted, civil society became one of the few remaining spaces for rebuilding democratic norms from the ground up (Ágh, 2013; Jenne & Mudde, 2012, pp. 151–154). Within this constrained environment, open and inclusive forums became essential (Csink & Fröhlich, 2020, p. 125). **Urbanity** was conceived within this narrowing democratic sphere as a low-threshold public-space format for civic discussion, designed to bypass institutional gatekeeping.

5.1.2 Roots of Democratic Participation in Environmental Governance

Under state socialism, governance was centralized and environmental decision-making entirely top-down. By the late 1970s, crises such as industrial pollution and fish die-offs triggered public concern. Initial responses were led by experts through limited channels—state-controlled complaints, petitions, and small-scale protests (Vári, 1997, pp. 274–277). By the 1980s, environmental activism had become a major outlet for democratic resistance, expanding both its actors and methods. Scientists, activists, and emerging political figures mobilized around cases such as the proposed Paks nuclear-waste repository, broadening the democratic repertoire through forums, demonstrations, and media engagement (Vári, 1997, pp. 277–279).

After 1989, legislation including Act LXV of 1990 on Local Governments and Act LXIII of 1992 on the Protection of Personal Data and Disclosure of Public Interest Data expanded citizens' formal rights to participate in governance (Government of Hungary, 1990, 1992, 2011b). Civil organizations began influencing permitting processes and conflict resolution through opinion polls, media campaigns, and expert-supported forums (Vári, 1997, pp. 279–293), while some investors experimented with early stakeholder engagement. Yet public trust remained low. Decades of top-down control had fostered deep mistrust of experts and officials, and many saw new participation channels as superficial. Civil actors faced structural disadvantages when opposing powerful economic interests. Market-based approaches and financial compensation sometimes improved attitudes toward environmental protection but rarely ensured genuine inclusion. A persistent “paternalistic-elitist mentality” among decision-makers meant that citizens were seldom treated as equal partners (Vári, 1997, p. 294). Informal consultations and opaque power relations preserved a dominion model of governance (Gergely, 1997). These dynamics nurtured societal passivity, corruption, and xenophobia—conditions still shaping Hungary's civic culture (Miszlivetz, 1999).

EU accession in 2004 introduced the principles of subsidiarity and partnership, revitalizing local initiatives (Dömötör, 2009, pp. 16–17). By 2010, these policies had re-legitimized small-scale communities and cooperatives. Civil society expanded in number but remained financially fragile and dependent on state support, often struggling with day-to-day survival and persistent shortages of volunteers (Böhm, 1999; Buzogány, 2015; Czike, 2001; Czike & Kuti, 2005).

Under the Orbán government, post-2010 civil society faced mounting financial and political pressure. State funding was reduced and limited mainly to project implementation (Bocz, 2009; Foltányi & Varga, 2017, pp. 13–15), while independent sources—such as the Norwegian Civil Fund—came under direct political attack. The 2014 “Norwegian case” involved unlawful audits of fund-managing NGOs ordered by the Prime Minister, temporarily halting their operations (Foltányi & Varga, 2017, pp. 27–29; hvg, 2021, August 4, 2023, December 19; Telex, 2021, July 23). This was followed by Act LXXVI of 2017 (Government of Hungary, 2017b), criticized internationally for restricting foreign

support and undermining civil independence (Amnesty International, 2021, May 14). The resulting environment contributed to the withdrawal of major democratic institutions, including the Open Society Foundations and Central European University (Molnár, 2019, p. 61).

In 2015, *Urbanity* was developed with support from *OFF-Biennale Budapest*, an independent art initiative aimed at strengthening Hungary's autonomous art scene and fostering critical public discourse through artistic means (artPortal, 2015, April 28; NeMe, 2015, February 8). Within this setting, the game became both an artistic medium and an accessible, gameplay-based participatory tool for sustaining dialogue on urban and landscape issues as formal channels narrowed.

5.1.3 Public Participation in Landscape Governance Under the European Landscape Convention

While early environmental activism addressed diverse ecological concerns, landscape governance emerged as a distinct policy field only in the late 2000s. The turning point came with Hungary's 2008 ratification of the European Landscape Convention, which positioned public participation as a strategic priority in landscape protection, planning, and management (Department of National Parks and Landscape Protection, 2017).

The subsequent National Landscape Strategy was prepared through a multi-actor process involving ministries, professional associations, and civil society. It defined objectives for sustainable land use, livable settlements, and stronger landscape identity (Department of National Parks and Landscape Protection, 2017, p. 56, Sub-objective III.2). Crucially, it treated citizen involvement as central rather than supplementary, calling for legal review and active engagement by municipalities, educational institutions, and the public (Department of National Parks and Landscape Protection, 2017, pp. 64, 70).

This vision rests on a broad legal foundation. The Fundamental Law guarantees access to information, freedom of expression and assembly, and the right to petition (Government of Hungary, 2011d)—though, as noted in Section 5.1.1, the exercise of these rights is increasingly constrained. Complementary sectoral laws—most notably Act LXXVIII of 1997 on the Built Environment—mandate cooperation between authorities, civil society, and citizens in shaping and protecting settlements (Government of Hungary, 1997, §§2, 3 (1) d))⁴. Additional legislation governs territorial development (Government of Hungary, 2023, Act CII), settlement development (Government of Hungary, 2012a, Act CLVII, §§29–66), nature conservation, spatial planning, heritage protection, and environmental regulation (see Table 5.1).

The Strategy also proposed practical tools to support participation, including

4 The Act has undergone continuous amendments over the years. Among these, CCI 2011 carried out the alignment with the Fundamental Law (Government of Hungary, 2011a, 142 §), and CLVII 2012 supplemented it with a detailed presentation of urban development and planning (Government of Hungary, 2012a, §§ 29–66).

a national landscape-value database, digital platforms, and measures encouraging community stewardship (Földművelésügyi Minisztérium, 2017, p. 83). By combining structural reforms with local empowerment, it reflected the ethos of the European Landscape Convention—though its success depended on political will and institutional openness (Berki & Gajdics, 2017; Dömötör, 2009, p. 55; Fülöp, 2005).

Despite this framework, a significant gap persists between ambition and practice. **Urbanity** aligns with the Convention's participatory ethos by creating informal yet important spaces for civic dialogue that complement underused institutional mechanisms.

Table 5.1 Legal acts supporting public participation in landscape governance across thematic areas in Hungary. Table by the author, based on Department of National Parks and Landscape Protection (2017, pp. 74–75, Annex 1).

Area of Influence	Name of the Act
protection of nature	1996 Act LIII (Government of Hungary, 1996a)
protection of cultural heritage	2001 Act LXIV (Government of Hungary, 2001)
general rules for environmental protection	1995 Act LIII (Government of Hungary, 1995)
shaping and protecting the built environment	1997 Act LXXVIII (Government of Hungary, 1997)
protecting world heritage	2011 Act LXXVII (Government of Hungary, 2011c)
territorial development and spatial planning	1996 Act XXI (Government of Hungary, 1996b)
spatial planning scheme of Hungary and certain priority areas	2018 Act CXXXIX (Government of Hungary, 2018)
forests, forest protection, and forestry	2009 Act XXXVII as amended by 2017 Act LVI (Government of Hungary, 2017a)
protection of arable land	2007 Act CXXIX (Government of Hungary, 2007)
protection of settlement character	2016 Act LXXIV (Government of Hungary, 2016)
mining	1993 Act XLVIII (Government of Hungary, 1993)

5.1.4 Legal Frameworks and Planning Mechanisms for Public Participation

The effectiveness of the National Landscape Strategy depends on broader legal and institutional frameworks—both within and beyond spatial planning—that determine how, when, and to what extent the public can participate in landscape issues.

Hungary's planning system comprises two main tiers: (1) territorial development at national and regional levels (Government of Hungary, 1996b, §2; 2023,

NATIONAL LEVEL

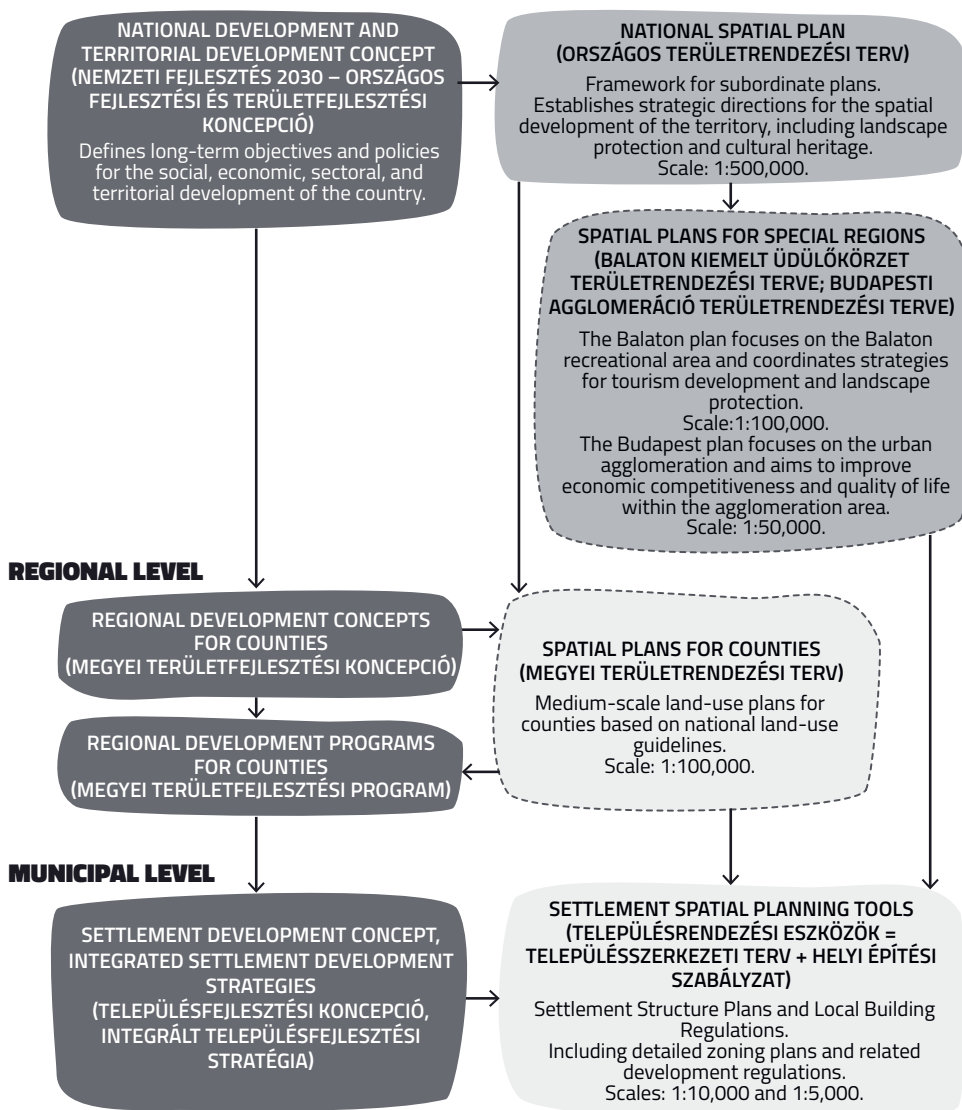


Fig. 5.1 Structure of Hungary's national, regional, and municipal spatial planning system. Graphic by the author, based on OECD (2017, p. 119) and Scharmann (2020, p. 5).

Act CII; Hoffman, 2015)⁵ and (2) settlement development at the municipal level (e-epites.hu, 2024, February 15; Government of Hungary, Act CLVII, §§29–66; László, 2006). Established in the mid-1990s as part of administrative reform, this hierarchy aligns with European spatial-planning standards (Government of Hungary, 1996b, 2018) and ranges from the National Territorial Development Concept (Government of Hungary, 2012b; Parliament of Hungary, 2014) to local Settlement Development Concepts (Government of Hungary, 2012c), supported by detailed regulatory plans (Fig. 5.1).

At national and regional levels, Government Decree 218/2009 requires a partnership plan (Government of Hungary, 2009, §13 (1))⁶ specifying how stakeholders—citizens, NGOs, professional associations, and enterprises—are to be involved (Government of Hungary, 2009, §13 (3)). Tools may include public forums, focus groups, expert panels, exhibitions, surveys, and jury-style deliberations (Government of Hungary, 2009, §13 (2) a)–c)).

At the local level, Government Decree 419/2021 (VII.15.)—replacing 314/2012 (XI. 8.)—regulates public review of settlement plans, design manuals, and aesthetic rules (Government of Hungary, 2012c; 2021, §62 (1) a)–b)). Municipalities may also adopt a *partnership decree* (Government of Hungary, 2021, Chapter IX, §75) embedding participation throughout early visioning, drafting, and consultation phases (Government of Hungary, 2021, §75 (2) a)–c)).

The Municipal Act—Act CLXXXIX of 2011, updating Act LXV of 1990 (Government of Hungary, 1990)—further requires annual public hearings, open council meetings (Government of Hungary, 2011b, §53 (3)), and publication of planning documents to ensure transparency (Government of Hungary, 2011b, §54 a–b).

Although this framework formally aligns with the Aarhus Convention and EU norms, its practical implementation is often minimal or symbolic (Berki & Gajdics, 2017; Fülöp, 2005). Outcomes depend largely on local initiative and the willingness of leaders, planners, and civil actors to enable genuine dialogue (Dömötör, 2009, p. 55).

Within this uneven practice, the partnership decree (Government of Hungary, 2021, §75 (3) a)–d)), when combined with accessible tools such as *Urbanity*, offers a promising avenue for closing the gap between formal obligations and meaningful civic participation in urban and landscape planning.

5 The most recent update of the legal framework, Act CII 2023 (Government of Hungary, 2023), restored the historical name *vármegye* for counties, literally translated as “castle county” as a reminder of “fiefdoms” from the Kingdom of Hungary.

6 The previous “Government Decree 184/1996 (XII. 11) on the order of coordination and acceptance of spatial development concepts and programs, as well as spatial plans” required coordination between representative bodies, chambers and experts, and prescribed to inform the public (§ 21–22).

5.2 Participatory Urban Planning in Budapest, 2014–2015

Between 2014 and 2015, participatory urban planning in Budapest gained renewed momentum. Alongside the first EU-funded experimental projects, the Metropolitan Municipality—under Chief Architect Sándor Finta—began to explore innovative directions. At the same time, a diverse range of civil-society initiatives emerged, supported by still-accessible international funding. These actors enriched the Hungarian-language literature on participation in landscape issues and introduced new case studies to community-based planning practice. Simultaneously, the influence of gamification became increasingly visible: a growing number of games and game-like methods were developed to engage residents in urban issues.

It was within this socio-political context that *Urbanity* was conceived—an initiative by civic activists seeking to involve everyday pedestrians in critical discussion about urban space.

5.2.1 Institutional Experiments of Participatory Planning in Budapest

Budapest's urban-planning system operates within a dual self-government structure, comprising the Metropolitan Municipality and twenty-three district municipalities, each with its own elected mayor and representative body. These two levels function autonomously and divide responsibilities by territorial scope: districts manage most local matters, while the Metropolitan Municipality addresses city-wide and inter-district issues (Government of Hungary, 2011b, §§22–26). In addition, the state influences planning in the capital through so-called “projects of national economic importance.” Around 2015, initiatives such as the Ludovika Campus redevelopment and the Liget Budapest project bypassed municipal and district-level regulations and were implemented under direct state control (Dercsényi, 2014, November 27; Kálmán, 2015, October 9).

Within this landscape of divided authority and competing interests, Budapest's first participatory urban-planning projects were launched—largely through EU-funded initiatives. The Mátyás Square redesign (2004), part of the initial phase of the Magdolna Quarter Program, marked Budapest's first community-based public-space development project (Alföldi et al., 2007; Alföldi & Horváth, 2009; építészforum, 2008, May 21, 2010, December 20; Faurest, 2010; Horváth & Faurest, 2011, pp. 38–39). A decade later, the Teleki Square revitalization (2010–2014), led by Újirány Landscape Architects, significantly advanced these methods (Faurest, 2010; Faurest & Alföldi, 2015; hvg, 2014, September 10; Landezine International Landscape Award, 2018; Majorné Venn, 2014, October 16; Octogon: Architecture & Design, 2019, June 25; Társak a Teleki Térért Egyesület, 2010, September 10; Tihányi, 2012, 2013, August 14; Újirány, 2023). The participatory process included twelve community meetings, on-site visioning sessions, temporary installations, and interactive mapping. It led to the formation of the Teleki Square Association, which continues to steward the space. Although widely cited as a best practice, the project

also revealed persistent challenges in engaging marginalized groups—particularly Roma residents and people experiencing homelessness (Bródy, 2022; Keresztély, 2017; Sain, 2014, September 24, 2016, January 11, 2018, February 19).

Building on these precedents, Sándor Finta—Chief Architect of Budapest between 2012 and 2016 (MTI, 2012, May 15), under the Fidesz-led administration of Mayor István Tarlós (Nemzeti Választási Iroda, 2014)—championed a more participatory approach to municipal planning. Despite increasing centralization (see Section 5.1), Finta launched several pilot programs to institutionalize public involvement (Bagi, 2015, March 25; építészfórum, 2015, October 2), including:

- **Rögtön jövők! (2013–2016):** Aimed to revitalize vacant ground-floor retail spaces through partnerships among districts, NGOs, and start-ups. Properties were repurposed for cultural and social use, and the program advocated regulatory reforms for more flexible asset management (Bagi, 2015, March 25; Kálmán, 2015, October 9; Városépítési Főosztály, 2013, November 21).
- **TÉR_KÖZ Program (2013–2018):** Redirected the city's Urban Rehabilitation Fund toward projects combining public-space renewal with social activation. Applications—submitted by district governments in collaboration with civil organizations—were required to include community engagement, private co-financing, and multifunctional design (Deák et al., 2018; építészfórum, 2015, October 2; Óbuda-Békásmegyer Városfejlesztő Nonprofit Kft., 2018; Térköz Pályázat, n.d.).
- **Budapest Dialog (2013–2014):** Piloted digital and in-person engagement tools—such as online idea platforms and thematic workshops—to promote transparency and responsiveness in planning (budapestdialog, 2023).

Finta also supported child participation: in the planned redesign of Hölcsey Ferenc High School's courtyard, the Chief Architect's Office invited kultúrAktív to develop a youth-focused engagement process (E_20150115). Although the project was never implemented, the initiative reflected a growing institutional openness toward inclusive participatory methods.

5.2.2 Civil-Led and Community-Based Urban Initiatives in Budapest

While municipal institutions experimented with participatory frameworks, their impact remained largely invisible in residents' everyday experience: "Strangely enough, it's almost a rarity these days for someone to genuinely care about what different social groups think when it comes to urban issues. In Budapest, it's pretty uncommon to feel that city leaders or service providers are actually interested in what would be good—let alone best—for you or your neighbor."⁷ (Járókelők, 2015, August 3).

⁷ „Furcsa, de ma már szinte különlegességnek számít, hogy valaki mindenféle társadalmi csoport véleményére kíváncsi a városi kérdéseket illetően. Budapesten elég ritka, hogy az ember azt érzi, érdekelte a város vezetését, vagy a szolgáltatót az, hogy neki, vagy a szomszédjának mi lenne a jó — nem, hogy a legjobb.”

In this climate, grassroots and civic initiatives gained strength, many of them supported by international donors such as the Norwegian Civil Fund. Despite increasing political pressure at the national level, late 2014 and early 2015 saw a dynamic civic atmosphere. Numerous associations worked to improve urban life by promoting sustainable practices (Mindspace; Ökotárs – Hungarian Environmental Partnership Foundation; Magyar Kerékpáros Klub; Messzelátó Egyesület), fostering public engagement in planning (Járókelők; Mi Utcánk; Közösségfejlesztők Egyesülete – Hungarian Association for Community Development), raising environmental awareness (Humusz Szövetség; Levegő Munkacsoport), and advancing community-driven urbanism (KÉK; Valyo). In parallel, kultúrAktív pioneered a new wave of child- and youth-centered participation in urban planning, emphasizing intergenerational dialogue and playful, educational approaches to shaping cities.

An expanding body of Hungarian-language literature also played a key role in legitimizing participation as a core principle of urban and environmental planning. Civil society organizations—including EMLA (Environmental Management and Law Association), Ökotárs Alapítvány (Hungarian Environmental Partnership Foundation), and Közösségfejlesztők Egyesülete (Hungarian Association for Community Development)—authored handbooks, methodological guides, and policy reports that adapted international concepts to Hungarian legal, social, and planning contexts (Bardóczi & Giczey, 2010; Bodorkós et al., 2006; Bullain & Csanády, 2008; Harkai, 2006; Horváth & Faurest, 2011; Pallai, 2010; Péterfi & Sain, 2010).

Notable participatory projects from this period included:

- **Parkra vár a Zsókavár:** Organized in Budapest's 15th District and involving more than 40,000 residents, this initiative—facilitated by the Közösségfejlesztők Egyesülete—combined structured interviews, a five-session co-design cycle, and community-informed park design (Boda et al., 2016; Péterfi, 2013; Tóth, 2016; Tóth, 2016).
- **Normafa Közösen:** A civic response to state-led redevelopment plans for the Normafa area. It mobilized public dissent and proposed a sustainability-oriented, community-driven alternative vision for one of Budapest's largest green spaces (Kristin & Szilágyi-Nagy, 2015; Normafa Park, 2024; Norvég Civil Támogatási Alap, 2024).
- **MOL Zöldövezet Program:** Launched in 2005 by the MOL Group and Ökotárs, this long-running initiative supported community-led revitalization of inner courtyards and public green spaces across Budapest neighborhoods (Budapest Főváros Önkormányzata, 2014, October 1; Bullain & Csanády, 2008; Horváth & Faurest, 2011; Ökotárs Alapítvány, n.d.).

Together, these initiatives made participation visible and tangible in Budapest's urban development. By operating outside formal planning mandates, they enriched participatory theory and practice, laying crucial groundwork for alternative forms of urban governance.

5.2.3 KultúrAktív and the Rise of Game-Based Participation in Budapest

By 2015, alongside these institutional and civic efforts, Budapest's participatory scene was being reshaped by creativity, play, and gamification. Interest in games and gamified platforms as innovative tools for civic engagement grew rapidly, with conferences and public events beginning to connect the serious topic of urban planning with play and games (Böhler, 2015, February 8; JátékosLét Kutatóközpont, n.d.; kultúrAktív Egyesület, 2014, October 24, 2015, December 12; Szilágyi-Nagy & Zajacz, 2015, November 28). That same year, the Budapest University of Technology and Economics launched Hungary's first university-level course on game design and game psychology—an important step toward institutionalizing the field (E_20150714; építészfórum, 2015, July 13; iPon, 2015, August 18).

Within this emerging environment, the kultúrAktív Association became a leading advocate of game-based participation, combining its established focus on children's involvement in urban planning with the design of playful, accessible engagement tools (kultúrAktív Egyesület, n.d.):

- **SzÉpítészek – Budafok Belváros Diákszemmel (2014):** Engaged 10–16-year-olds in reimagining public spaces in Budapest's XXII District through mapping and visioning (Döbrönte, 2014; kultúrAktív Egyesület, 2014, June 27).
- **Pop-up Pest (2012–2015):** A 25 m² “live board game” inviting players to plant trees, protect heritage buildings, and organize street festivals in downtown Budapest (Tóth & Poplin, 2013).
- **ParticiPécs and Alakítsd a Városod! (2014–2016):** A tabletop board game enabling youth to propose urban developments through structured play, integrated into the child-engagement project Shape Your City! (Tóth & Poplin, 2014, June 3–6).

Budapest's vibrant civic scene encouraged further experimentation with such formats. At the first Mindspace conference, kultúrAktív presented the concept for **Urbanity** (Zajacz, 2014). The idea later received support from *OFF-Biennale Budapest*, which positioned art—and, by extension, games—as catalysts for critical thinking (artPortal, 2015, April 28; NeMe, 2015, February 8). The completed game debuted at the second Mindspace event on gamification (Tóth & Szilágyi-Nagy, 2015, October 9), marking the beginning of its dual role as both a participatory tool and a research case.

5.3 *Urbanity*: Development and Application of a Serious Participatory Landscape Game



Fig. 5.2 *Urbanity*: Street board game session at Erzsébet Square during the OFF-Biennale, Budapest, 2015. Photo by kultúrAktív Egyesület. Photographer: György Orbán.

Emerging from the creative and game-based participation landscape described in Section 5.2.3, *Urbanity* is a street board game developed in 2015 by volunteers from the Hungarian kultúrAktív Association—including educators, architects, urbanists, and landscape architects committed to built-environment education (Szilágyi-Nagy & Tóth, 2017; Tóth, 2020; Tóth & Szilágyi-Nagy, 2021). Its creation was closely tied to the first *OFF-Biennale Budapest*, a grassroots contemporary art initiative responding to the shrinking civic space in Hungary (Amnesty International, 2021, May 14; artPortal, 2015, April 28; Foltányi & Varga, 2017, pp. 27–29; Molnár, 2019, p. 61).

An early report on the project described the game’s essence as follows:

“The game is built on a simple yet highly effective idea. Moderated by a facilitator, players take turns asking each other yes-or-no questions from game cards. After a count to three, all players respond simultaneously with either “yes” or “no.” The cards feature divisive questions related to urban coexistence and the use of public space. Because there’s no time for lengthy reflection, players tend to give the response that feels most instinctive to them. These differing opinions immediately spark dialogue and debate—which the game’s rules are

designed to support. It rewards argumentation, compromise, and the achievement of consensus.”⁸ (építészfórum, 2016, February 8).

This early account captured both the simplicity and communicative ambition of **Urbanity**: translating complex urban and social questions into accessible, dialogue-based interaction that encourages multiple perspectives and shared reasoning in public space.

OFF-Biennale Budapest’s advocacy for critical engagement and freedom of expression (e-flux, 2023; NeMe, 2015, February 8; OFF, n.d.; Zafiropoulos, 2017, October 31) strongly shaped **Urbanity**’s conception as a civic dialogue tool. As its designers explain: “The excitement of the game is in the topicality of the questions, in the joy of dialogue, in the extreme diversity of the opinions and in the recognition of the fact that everyone has the right and responsibility to share their opinion” (Tóth, 2020, p. 34).

Since 2015, the game has evolved through multiple prototypes and adaptations guided by a player-centered design process (Fullerton, 2019). It has developed from a spontaneous street encounter format into a serious participatory landscape game that structures and facilitates small-group dialogue on urban issues (Fig. 5.2).

5.3.1 Structuring and Facilitating Small-Group Communication in **Urbanity**

Urbanity initiates dialogue on everyday landscape issues through yes-or-no questions that invite spontaneous responses and frame inclusive discussion on urban dilemmas (Fig. 5.3). These range from practical choices—*Would you splash in the fountain?*—to ethical and communal questions—*Do you agree with closing playgrounds at night?* The prompts serve as catalysts for deeper collective reflection and debate.

Gameplay follows a repeating cycle: one team reads a yes-or-no question aloud, all participants take positions and vote simultaneously (agree = raise hand; disagree = keep hands down) (Fig. 5.4). This sets the stage for a moderated discussion (Fig. 5.5). The facilitator ensures constructive dialogue, summarizes key ideas, and promotes inclusion, while players are encouraged to share thoughts openly, listen actively, and engage respectfully.

Every argument—regardless of stance—is rewarded with a magnetic token placed on a magnetic building, thereby coloring the game board and symbolizing how diverse perspectives shape the built environment (Fig. 5.6). Teams compete to collect the most tokens while collectively constructing a shared city.

8 „A játék alapja nagyon egyszerű, de remekül működő ötlet. A játékosok egy játékvezető által moderált rendben felteszik egymásnak a játékkártyákon szereplő eldöntendő kérdéseket, és három számolás után egyszerre válaszolnak igennel vagy nemmel. A kártyákon a városi együttélssel, közterek használatával kapcsolatos, megosztó témájú kérdések találhatók. Mivel nincs idő a vélemények hosszas megfontolására, a játékosok a számukra leginkább természetes választ adják, a különböző vélemények azonnal párbeszédet, vitát generálnak, ezt a játék mente lehetővé is teszi, illetve az érvelést és a kompromisszumot, illetve konszenzust jutalmazza.”

After all arguments are heard, a second vote captures any shifts in opinion before proceeding to the next round.

The process repeats until all teams have played. At the end, the points—symbolized by magnets—are tallied, celebrating not just competition but the collaborative construction of a shared urban vision.



Fig. 5.3 Urbanity: Players engage with yes-or-no questions during Family Day, Veszprém, 2023. Photo by DEMO Egyesület. Photographer: Péter Oszkai.



Fig. 5.4 Urbanity: “Raise your hand if you agree—keep it down if you don’t.” Street Festival, Gödöllő, 2021. Photo by kultúrAktív Egyesület. Photographer: Dániel Mátyás Fulöp.



Fig. 5.5 Urbanity: Game master (wearing dotted trousers) facilitating dialogue during the Bródy Street Festival, Budapest, 2020. Photo by kultúrAktív Egyesület. Photographer: Máté Lakatos.



Fig. 5.6 Urbanity: Each argument earns a magnet—scoring in progress at Family Day, Veszprém, 2023. Photo by DEMO Egyesület. Photographer: Péter Oszkai.

5.3.2 From Street Game to Participatory Planning Tool



Fig. 5.7 *Urbanity*: Testing the school version in Budaörs, 2017. Photo by kultúrAktív Egyesület. Photographer: László Ádám.

Conceived initially as a street board game, *Urbanity* soon became an experimental platform for the kultúrAktív design team, evolving from a playful civic encounter into a format capable of supporting structured discussion across multiple contexts—including participatory urban planning (Szilágyi-Nagy & Tóth, 2017). It quickly became clear that the game could be more than a debate tool: it could serve serious purposes in design and planning, qualifying as a serious participatory landscape game—as defined in the Play/Game Compass (Szilágyi-Nagy, 2022; see Section 2.2.2)—thanks to its core mechanism of structured argumentation.

Early adaptations targeted fast-paced festival formats, updating the yes-or-no questions to reflect event themes such as *Budapest 100* and *Népszínház Carnival*, and enabling individual passersby to contribute arguments—and thus magnets—to the collaborative construction of the city (Gyárfás et al., 2017). In parallel, an educational version was developed and tested to help secondary school students practice critical thinking and argumentation through four thematic debate categories, with the option to add customized questions drawn from their daily lives (Fig. 5.7) (Gyárfás et al., 2017; Tóth & Szilágyi-Nagy, 2021). These adaptations tested both the flexibility of the game’s content and the inclusiveness of its discussion format, laying the foundation for its later use in participatory design processes.

Building on this groundwork, the design team developed a *participatory planning version* in which teams could formulate their own questions about proposed transformations at specific sites. Examples included *Should there be a book stop in the park?* or *Should a ping-pong table be installed at the bus stop?* Discussions explored these ideas from multiple perspectives, and consensus was assessed at the end of each round.

The first community design application took place in December 2016 in Törökbálint, where nearly 90 secondary school students co-designed community spaces by mapping favorite places and proposing interventions. The arguments generated during gameplay provided valuable insights into the spaces from children's perspectives. This initiative received second prize in the Helping Students 2017 – Host Institution Best Practices competition (Szilágyi-Nagy, 2018, January 3; Szilágyi-Nagy & Tóth, 2017).

Subsequent applications extended to a wide range of age groups and contexts: engaging university students from Corvinus University of Budapest in the interior design of the campus, partnering with the Anyahajó Association to envision changes in the József Attila housing estate, and supporting the 2021 community planning of the courtyard at Budaörs 1st Elementary School. In this latter case, students were trained as facilitators and organized a series of games for their peers (Reith et al., 2021; Szilágyi-Nagy, Reith, et al., 2022).

Across these adaptations, the game retained its core mechanism of argumentation while evolving into a structured discussion-oriented tool. In the typology presented in Section 2.2.2, **Urbanity** is best classified as a serious participatory landscape game employing a deliberative discussion strategy—using prompts, voting systems, and facilitation to foster critical, pluralistic debate—making it a valuable tool for advancing the European Landscape Convention's vision of participatory landscape governance (Council of Europe, 2000a). Its design process and facilitation structure also make it well suited for current research on how the game structures and generates interaction through which players can jointly construct the meaning of the landscape, reach mutual understanding, and explore pathways toward agreement.

5.3.3 **Urbanity** Adaptations: Supporting Dialogue on Urban Sustainability

Beyond its role in participatory planning, **Urbanity**'s capacity to bring small groups together and facilitate discussion of urban topics from multiple perspectives drew the attention of other civil organizations addressing specific urban challenges—such as heritage protection, green-infrastructure transformation, and minimalist lifestyle practices. In response, the kultúrAktív team collaborated with these organizations to adapt the game's core discussion mechanic to serve new purposes—ranging from debate and ideation to advocacy and fostering sustainable everyday behavior—while preserving its emphasis on multiple perspectives as a defining feature (Tóth, 2020, pp. 34–35; Tóth & Szilágyi-Nagy, 2021, p. 128):

- **Co-design of urban green infrastructure:** *Budapest Green* was developed for Budapest's 13th District to guide residents in identifying and prioritizing opportunities for green infrastructure. Players placed green stones on a monochrome board to visualize and discuss potential interventions and their social-spatial effects (Fig. 5.8).
- **Minimalist urban lifestyle:** *Simplicity* was created with the Messzelátó Association to address minimalist urban living. Participants deliberated on everyday sustainability choices—such as reusing expired food or adopting car-free habits—within a supportive and reflective group dialogue (Fig. 5.9).
- **Co-mapping urban heritage:** *DANUrBanity* was designed in collaboration with the Kortárs Építészeti Központ. This version focused on heritage awareness along the Danube. Participants collaboratively mapped and discussed built, natural, and cultural heritage, constructing shared profiles of local sites and values (Fig. 5.10).

Across these adaptations, *Urbanity* demonstrated its capacity to structure small-group discussion on diverse landscape issues, enabling non-experts to contribute to collective understandings of urban environments. The project's innovative approach—both in its original design and in these thematic collaborations—received formal recognition in 2020, when the Hungarian Association of Architects awarded *Urbanity* the national UIA Architecture & Children Golden Cubes Award in the Written Media category. In 2021, it won the international round of the award, granted by the International Union of Architects for its creative integration of game mechanics into architectural education and civic engagement (építészfórum, 2021, May 3; International Union of Architects, 2024; Octogon: Architecture & Design, 2021, June 18). This recognition not only celebrated the project's ability to translate complex urban issues into accessible, playful formats but also underscored its value as a bridge between education, design practice, and public participation.



Fig. 5.8 *Budapest Green: Urbanity* adaptation for co-development of urban green infrastructure in the 13th District with Belső Kertek Csoport, Budapest, 2016. Photo by Belső Kertek Csoport.



Fig. 5.9 *Simplicity: Urbanity* adaptation for minimalist urban lifestyle with Messzelátó Egyesület, Budapest, 2021. Photo by Messzelátó Egyesület.



Fig. 5.10 *DANUrBanity: Urbanity* adaptation for co-mapping urban heritage with Kortárs Építészeti Központ, Calafat, 2019. Photo by kultúrAktív Egyesület. Photographer: László Ádám.

5.4 Reading the *Urbanity* Prototype Case Studies

The following section provides an orientation for reading the four *Urbanity* (Urbanity, n.d.) prototype case studies presented in Chapters 6–9. Having established *Urbanity* as a serious participatory landscape game that structures and facilitates small-group communication about urban landscape issues, this section outlines how the upcoming case studies are organized according to the analytical framework. It serves as a bridge between the theoretical-methodological foundations introduced in Chapters 3–4 and the empirical analyses that follow.

Urbanity was chosen as the empirical foundation of this research because it provides a communicative environment for observing how game design and facilitation structures shape and generate interaction in small groups, enabling participants to construct meaning and work toward agreement under varying design and facilitation conditions. From the game's first year of development (2014–2015), four early prototypes—*Clash*, *Parliament*, *Tactic Dice*, and *Tactic Card*—were selected for detailed analysis (Fullerton, 2019, p. 203). Each represents a distinct interaction structure that captures different aspects of communicative dynamics: *Clash* experimented with rapid one-on-one *opinion clashes*; *Parliament* modeled representative deliberation; *Tactic Dice* introduced elements of competition and chance; and *Tactic Card* allowed players to select questions for further discussion. Together, these prototypes form a coherent experimental sequence through which the study explores how game design and facilitation shape small-group communication, meaning-making, and agreement processes.

Each case study applies a three-layered analytical approach integrating data, method, and theory:

- **Visually**, the temporal and spatial progression of communication is mapped through spatio-temporal diagrams that trace turn-taking, feedback loops, and interaction density.
- **Thematically**, design and facilitation factors are identified from the development archive to reveal how game mechanics and facilitator tasks shape the communicative environment.
- **Theoretically**, findings are interpreted through social constructivist landscape theory and communicative action theory, linking the games' communicative processes to the European Landscape Convention's vision of public participation and deliberative landscape governance.

To ensure clarity and comparability, each prototype is presented following a consistent structure: (1) context of development and testing; (2) key game concept and rules; (3) visual analysis of communication and interaction; (4) thematic analysis of the game archive and the identified influential design and facilitation factors; and theoretical reflection through (5) social constructivist landscape theory and (6) communicative action theory.

This structure supports systematic comparison across prototypes and provides a transparent interpretive lens for understanding how serious participatory landscape games function as communicative environments in which small groups can participate in collective decision-making and problem-solving related to landscape issues.

Together, these four case studies constitute the empirical core of the dissertation. The following chapters analyze each prototype in depth, tracing how variations in game design and facilitation structure communication and generate distinct interaction patterns, enable the co-construction of landscape meanings, and contribute to the deliberative quality of participation envisioned by the European Landscape Convention.

6

Small-Group Communication in *Clash*

Developed in early 2015 during Phase I of the *Urbanity* project, *Clash* was the first prototype to experiment with bodily movement, rhythm, and minimal verbal exchange as tools for spontaneous stance-taking in public space. Conceived as a fast-paced, encounter-driven game, it explored how immediacy and physicality can stimulate communication and reflection in small groups.

The chapter reconstructs the prototype's development (Section 6.1) and gameplay structure (Section 6.2), followed by a visual analysis of small-group communication process (Section 6.3), a thematic analysis of influential design and facilitation factors (Section 6.4), and theoretical reflection through social constructivist landscape theory (Section 6.5) and communicative action theory (Section 6.6).

6.1 Prototype Development and Testing

Clash was developed through eight iterative design workshops (M1–M8, see Table 6.1). The interdisciplinary design team—including architects, landscape architects, and educators—focused on creating a movement-based game structure that could trigger spontaneous, embodied opinion-sharing. Core mechanics such as yes-or-no question cards, *rhythmic random encounters*, team rotation on the gong, and the symbolic ritual of *opinion clashing* were gradually defined and refined.

Five indoor testing sessions (M2, M3, M4, M6, M7) involving 4–10 adult participants from the development team were used to calibrate the balance between physical activity and thematic engagement. These experiments shaped *Clash* into a fast-paced, encounter-driven format and laid the conceptual foundation for the more deliberative prototypes that followed.

Table 6.1 *Clash*: Game development workshops and play tests. Table by the author.

Gameplay Nr.	Brief description of the event	Player Nr.	Age of Players	Place played
M1_20141120	Design Workshop: Testing the <i>Partici-Pécs</i> game to get inspiration for the game development process.	–	–	–
M2_20141210	Design Workshop with Testing: <i>Clash</i> was introduced and tested. Gameplay centered on yes-or-no questions, with points awarded for consensus.	4-10	Adults	Indoor

Gameplay Nr.	Brief description of the event	Player Nr.	Age of Players	Place played
M3_20141219	Design Workshop with Testing: Formulating the game's serious goals about environmental change and emphasizing player opinions to encourage debate.	4-10	Adults	Indoor
M4_20141230	Design Workshop with Testing: Introduced flexible team formation and new dynamics such as the earthquake to increase engagement.	4-10	Adults	Indoor
M5_20150110	Design Workshop: New team members joined. Refined objectives to prioritize fast-paced, discussion-driven gameplay. Movement and the gong were emphasized.	–	–	–
M6_20150124	Design Workshop with Testing: Introduced two additional prototypes, including Gate , which used concentric circles and “gates” for advancement.	4-10	Adults	Indoor
M7_20150207	Design Workshop with Testing: Clash was enhanced; Gate evolved into Parliament . Systematic evaluation methods were introduced.	4-10	Adults	Indoor
M8_20150224	Game Design Workshop: Conducted a comprehensive evaluation of the prototypes based on OFF-Biennale competition criteria and internal assessments. Determined Clash and Parliament were equally effective.	–	–	–

6.2 Game Concept

Clash explores how small-group communication can be structured through rhythmic, embodied interaction. It introduces an early and experimental approach to synchronous, movement-based engagement with urban issues. The rule logic is structured into four distinct communication steps, each framing a different mode of interaction—from silent anticipation to active stance-taking—mapped onto the spatial and temporal choreography of the game.

6.2.1 Game Setup

A circular play area is arranged around a city map at the center of the room. Twelve bowls—three per team color (red, yellow, blue, green)—hold building blocks and are placed evenly in a circle around the city map. Participants form four color-coded teams and take up random positions in pairs around the bowls, thereby creating two concentric circles around the map. Each participant receives a set of thematic yes-or-no question cards. A gong, controlled by the facilitator, initiates synchronized movement and signals player rotation and interaction.

6.2.2 Goal of the Game

Players aim to earn construction blocks for their teams by reaching agreement during brief, face-to-face encounters around the bowls. Consensus leads to symbolic construction. The team that places the most blocks on the map by the end of the game wins.

6.2.3 Communication Steps

The rule logic of **Clash** is structured into four communication steps, each framing a distinct mode of interaction—from silent anticipation to active stance-taking. Together, they map the temporal and spatial choreography through which communication unfolds during gameplay.

- **Step 1: Pairing Players:** Players form four color-coded teams and position themselves in pairs around the bowls, creating two concentric circles around the game board. This arrangement establishes visual connectivity and a balanced physical distance between players, setting the stage for synchronized encounters.
- **Step 2: Rhythmic Random Encounters:** At the sound of the gong, all players rotate one step clockwise. If a player lands at a bowl matching their team color, they call out “Party time!” and engage with the player standing opposite them. The rhythm of the gong regulates tempo and interaction frequency, transforming movement into a communicative rhythm that structures participation.
- **Step 3: Opinion Clash:** The initiating player reads a yes-or-no question aloud. Both players respond simultaneously using hand gestures—raising a hand to indicate agreement, keeping it down to indicate disagreement.
 - If their answers match → proceed to **Final Step: Constructing with Consensus**, then return to **Step 2**.
 - If not → return to **Step 2** without earning a construction block.
 - This rapid exchange of gestures represents the central performative act of **Clash**: a compressed moment of stance-taking that externalizes opinion and provokes curiosity.
- **Final Step: Constructing with Consensus:** When consensus is reached, the questioning player’s team places one building block on the city map. This symbolic act visualizes shared understanding in the material form of construction. Gameplay then resumes with the next gong rotation, returning to **Step 2** and initiating a new interaction cycle.

6.3 Visual Analysis of the Small-Group Communication Process

Fig. 6.1 Clash: Visual analysis of the small-group communication process. Foldout diagram with legend (see pocket at the end of the volume). The legend applies to all diagrammatic detail views in Chapter 6. Graphic by the author.

This section presents how small-group communication unfolded in **Clash** through visual analysis, following the analytical framework introduced in Section 4.4.2.1. The result of this analysis is the overview shown in Fig. 6.1, which depicts the complete communication process and its steps as introduced in Section 6.2.3.

The communication process is examined from four perspectives in the following subsections (Sections 6.3.1–6.3.4): temporal structure (steps, snapshots, and looping rhythm), spatial organization (communication zones and spatial activation), patterns of communication around landscape issues, and the role of facilitation.

The visual analysis is supports the subsequent thematic analysis (Section 6.4) and contributes to the cross-case comparison and *Communication Pattern Analysis Method* in Chapter 11.

6.3.1 Temporal Structure: Steps, Snapshots, and Looping Rhythm

Interaction unfolds through three communication steps (gray boxes), culminating in a symbolic construction phase (black box labeled **Final Step**).

- The game has a one-loop structure (black arrow), meaning that after the **Final Step** the game always returns to **Step 2** to initiate a new round.
- An additional internal loop is visible within **Step 2**, producing a visually balanced and rhythmic sequence.

This simple structure generates a fast, predictable tempo that sustains player engagement and enables clear progression from stance-taking to symbolic action.

6.3.2 Communication Zones and Spatial Activation

The visualization identifies three concentric spatial components governing player movement and interaction:

- **Core zone:** The central black game board, activated only during the **Final Step** for symbolic construction.
- **Encounter zones:** The surrounding bowls act as modular anchors for localized interaction. These remain inactive (indicated by dashed gray lines) until *party-time* is initiated, that is, when a color match between a player's track and the building materials in a bowl triggers a verbal call-out and a temporary shift to question-based interaction. The activated

bowl becomes a temporary communication zone, momentarily concentrating interaction in a single location and suspending communication elsewhere; it is highlighted in the color of the initiating team.

- **Game space:** The larger gray area surrounding the bowls and central board defines the overall field for movement and rotation. Although spatially continuous, this zone is not communicatively active—it merely facilitates transitions between encounters.

During play, communication zones dynamically switch on and off. When *party time* is triggered, the corresponding bowl activates briefly while all other players freeze, becoming observers. After each rotation, participants reshuffle positions, forming new pairs and opening the possibility for multiple parallel—but isolated—micro-dialogues across different bowls.

6.3.3 Landscape Communication Patterns

Landscape-related questions emerge only during **Step 3**, once a player calls out *party time*.

The initiating player reads a landscape question aloud—represented by a white pulse arrow—and on the count of three, both participants simultaneously answer “yes” (Y) or “no” (N). If their answers align, the pair proceeds to **Final Step: Constructing with Consensus**; if not, play resumes from **Step 2**.

This binary, time-compressed exchange privileges speed and clarity over depth. Dialogue ends almost as soon as it begins, leaving little opportunity for elaboration, reasoning, or mutual reflection. While landscape issues are explicitly introduced, they remain surface-level triggers for stance-taking rather than topics of extended discussion.

6.3.4 Facilitator’s Role

The facilitator operates primarily as a temporal and structural regulator, striking the gong to synchronize rotations and control pacing, depicted as a rotation icon. Their influence is procedural rather than dialogic.

Although the facilitator’s presence is minimal in the visual diagram, thematic analysis later revealed their significant background influence on the rhythm and inclusiveness of interaction. Three *facilitation tasks* proved especially impactful: (1) enforcing the game’s tightly scripted rhythm and rules, (2) guiding transitions between steps and rotations, and (3) refreshing group energy during moments of stagnation.

Even while positioned outside the communication zones, facilitators sustained the game’s interactional framework—ensuring consistency, tempo, and equitable participation throughout the looping process.

6.4 Thematic Analysis of Factors and Facilitation Tasks of the Game Design Archive

This section identifies the key factors and facilitation tasks shaping small-group communication during *Clash*. The analysis draws on thematic coding of workshop notes, play-test observations, and internal correspondence, following the procedure described in Section 4.4.2.2.

Each communication step from the foldout diagram shown in Fig. 6.1 is revisited and discussed in a separate subsection (Sections 6.4.1–6.4.4), with reference to the legend provided in the foldout figure. First, the interactional pattern of the step is described in detail, followed by the identification and explanation of factors found to be influential on small-group communication, integrating structural and empirical perspectives. After the step-by-step discussion, the section concludes with the presentation of facilitation practices that were particularly influential in supporting or moderating communication (Section 6.4.5).

Findings from this section contribute to the *Game Design Catalogue* and *Facilitation Guide* (Chapter 10).

6.4.1 Step 1: Pairing Players

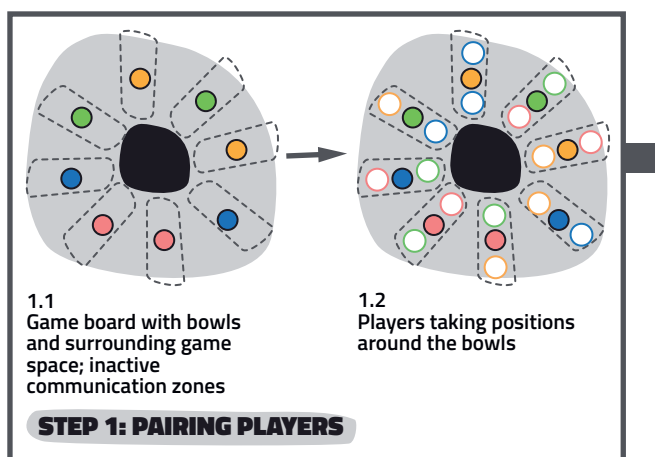


Fig. 6.2 *Clash*: Step 1: Pairing Players. Detail from Fig. 6.1 (see legend in foldout figure in the pocket at the end of the volume for symbol definitions). Graphic by the autho.

In **Step 1: Pairing Players** (Fig. 6.2), players form color-coded teams (green, red, yellow, blue), select a preferred landscape question, and prepare to enter the game space.

Snapshot 1.1 illustrates the initial spatial organization: the grey-shaded game space is structured around a central black game board, surrounded by twelve bowls (colored dots with a black mark), which serve as interaction anchors. Each bowl also represents a potential—but currently inactive—communication zone, indicated by dashed grey lines.

Snapshot 1.2 shows players choosing their starting bowls, thereby positioning themselves within the game space. While no verbal communication occurs at this stage, the act of positioning establishes the rotational structure that will guide future interaction. The visualization highlights how spatial arrangement precedes thematic exchange, setting the conditions for communication before it becomes verbally active.

6.4.1.1 NEW! Group Division

Definition: Group division is the structural arrangement of participants into one or more interaction units—fixed, random, or player-chosen—that shapes who interacts with whom, how often, and in what capacity. This design element guides the intensity, sequence, and equity of small-group communication. ↔ See Sections 6.4.1.1, 7.4.1.1, 8.4.3.4, 9.4.1.2, and 10.1.1.8.

Group division was a core structural feature in **Clash**, shaping how communication unfolded throughout the game. At the beginning, players were assigned to fixed pairs, each positioned around a bowl. This setup encouraged direct, face-to-face interaction and focused engagement within small units. By limiting communication to two-person exchanges, the game emphasized pair-based stance-taking over open group dialogue.

While this structure supported concentrated and balanced participation, it also restricted broader deliberation across the group. The *earthquake* mechanism—implemented as a facilitator intervention during **Step 2**—was designed to disrupt this configuration. When triggered, it allowed players to reorganize into new pairs or flexible larger groups, reshuffling interaction patterns and refreshing group dynamics.

6.4.1.2 NEW! Space Layout

Definition: Space layout refers to the spatial organization of the play area, including the arrangement of players and game elements. The configuration of space shapes how participants move, who they can see and hear, and what forms of interaction are made possible—or restricted. ↔ See Sections 6.4.1.2, 7.4.3.1, 8.4.1.2, and 10.1.2.3.

The space layout of **Clash** was defined by the central black game board and the surrounding color-coded bowls. These bowls were arranged in a circle at equal distances (**Snapshot 1.1**), establishing the physical framework of the play area and determining where players took their initial positions (**Snapshot 1.2**). This configuration structured both the rhythm of movement and the dynamics of small-group communication in the following steps.

- **Step 2:** Players rotated from bowl to bowl in synchrony with the facilitator's gong. The even spacing between bowls determined the physical effort required to form new temporary pairs. Although no verbal exchange occurred during rotation, the setup enabled handshakes or visible gestures across the bowls—activating non-verbal communication

modes (→ see **Communication Modes**, **Player Proximity**, **Player Visibility**). Regular spacing reinforced a consistent tempo of interaction across the field.

- **Step 3:** When *party time* was triggered, bowls marked active communication zones for verbal exchange. The circular layout enabled multiple simultaneous *opinion clashes* without cross-talk (→ see **Player Proximity**). However, players positioned farther away often struggled to follow discussions (→ see **Player Visibility**, **Player Audibility**), leading to partial disengagement or side conversations. Thus, the same spatial structure that fostered intimate exchanges also limited collective awareness of ongoing discussions.

6.4.1.3 NEW! Player Proximity

Definition: Player proximity refers to the physical distance between players, shaping the immediacy, intimacy, and mode of their interactions. Proximity influences the use of verbal, non-verbal, and embodied cues, thereby affecting focus, connection, and overall group cohesion. ↔ See Sections 6.4.1.3, 7.4.1.3, and 10.1.2.4.

Player proximity in **Clash** was defined by the circular arrangement of bowls (→ see **Space Layout**), which placed participants in tight formation around shared interaction points.

- **Step 2:** As players rotated clockwise, close proximity enabled repeated face-to-face encounters. Although verbal exchange was not permitted, players could gesture, make eye contact, or exchange brief handshakes (→ see **Player Visibility**, **Communication Modes**). These fleeting, embodied gestures reinforced interpersonal connection through non-verbal means, maintaining rhythm and anticipation between rounds.
- **Step 3:** When *party time* activated verbal clashes, proximity fostered intimate pair-based exchanges. The even spacing allowed multiple pairs to debate simultaneously without cross-talk. However, the same closeness also created zones of isolation (→ see **Player Audibility**, **Player Engagement**): players not directly involved in a clash often lost track of the ongoing discussions, leading to peripheral conversations or momentary disengagement.

6.4.1.4 NEW! Player Audibility

Definition: Player audibility refers to the clarity with which players can hear and understand one another. Audibility influences attention, participation, emotional tone, and the potential for shared understanding. ↔ See Sections 6.4.1.4, 7.4.4.2, and 10.1.2.6.

Audibility in **Clash** was shaped by the physical configuration of the play area and the spatial distribution of active and passive participants (→ see **Space Layout**, **Player Proximity**). While players could generally hear their immediate partners

clearly, background noise and spatial distance affected the group's overall capacity to sustain shared attention (→ see **Ambient Conditions**).

- **Step 2:** Although verbal exchange was not permitted during rotation, audibility still played a crucial role. Players needed to clearly hear the facilitator's gong, which coordinated synchronized movement across the field.
- **Step 3:** During *opinion clashes*, closely positioned pairs communicated verbally without difficulty. However, participants located farther from the active bowls often struggled to follow the exchanges. This auditory separation reduced collective engagement and occasionally led to side conversations or distraction (→ see **Player Engagement**).

6.4.1.5 NEW! Player Visibility

Definition: Player visibility refers to the extent to which players maintain a clear line of sight to one another. Visibility influences attention, awareness, and group-wide engagement by determining who is seen, who is watching, and who feels addressed or involved. ↔ See Sections 6.4.1.5 and 10.1.2.5.

Player visibility in **Clash** was shaped by the circular layout of the play area (→ see **Space Layout**, **Player Proximity**). Players stood on opposite sides of the bowls, facing one another, which enabled direct eye contact within pairs but restricted awareness of activities elsewhere in the circle.

- **Step 2:** During rhythmic rotation, players briefly faced each new partner. These moments allowed for visual cues—such as smiles, nods, or hand gestures—that sustained social connection and mutual recognition (→ see **Communication Modes**). However, visibility remained limited to a single partner at a time, reinforcing a pair-focused interactional structure.
- **Step 3:** When multiple *opinion clashes* unfolded simultaneously, visibility constraints became more pronounced. Players not engaged in an active clash could rarely observe others' exchanges due to obstructed sightlines. This limited collective awareness and reduced opportunities for shared reflection or cross-pair coordination.

6.4.2 Step 2: Rhythmic Random Encounters

In **Step 2: Rhythmic Random Encounters** (Fig. 6.3), players rotate clockwise through the game space in response to the facilitator's gong, forming temporary pairs around the bowls that define the rhythm of the game.

Snapshot 2.1: Players move clockwise through the space, circulating around the bowls that form part of the central board (indicated by colored dots with black frames). Their synchronized motion is paced by the facilitator's gong, represented by white rotation arrows.

Snapshot 2.2: As players move from bowl to bowl, they continuously form potential communication zones, shown as dashed grey circles around temporary

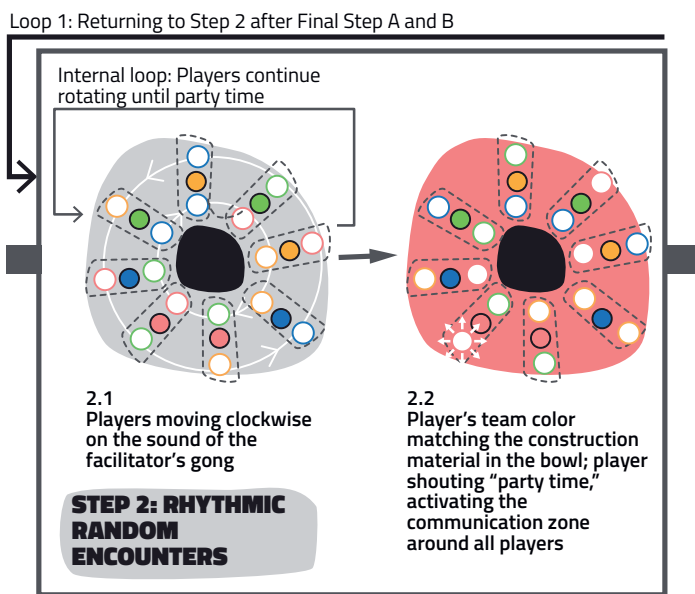


Fig. 6.3 *Clash*: Step 2: Rhythmic Random Encounters. Detail from Fig. 6.1. Graphic by the author.

pairs. These zones remain inactive while rotation continues (indicated by the grey internal looping arrow between snapshots). A communication event is triggered only when a player's team color matches the construction block placed in a bowl. The player then announces *party time*—visualized by the star-shaped broadcast symbol. At that moment, the communication zone around the pair activates and turns red, marking the start of verbal interaction. This pause in rotation signals the transition to **Step 3: Opinion Clash**.

6.4.2.1 NEW! Player Engagement

Definition: Player engagement is the emotional and cognitive investment that draws participants into play. It grows through curiosity, anticipation, and the shared making of meaning—conditions that determine how actively and authentically players contribute to small-group communication. ↔ See Sections 6.4.2.1, 7.4.4.9, 7.4.6.2, 8.4.3.2, 9.4.3.2.1, and 10.1.3.8.

In *Clash*, engagement stemmed primarily from uncertainty—specifically, from not knowing whether an *opinion clash* would occur. The *rhythmic random encounters*, paced by the gong yet producing unpredictable pairings, kept players alert and curious. At each rotation, they met a new partner without knowing whether *party time* would be triggered: “At the sound of the gong, I stepped to the right to the next bowl, where I met a new player. It was a strangely thrilling feeling to make eye contact with a stranger, waiting to see if the gong would strike again.”⁹ (M6_20150124).

Communication limits (→ see **Communication Modes**) intensified this emotional tension. Players could respond only with a “yes” or “no,” leaving reasoning

⁹ „A gongra jobbra léptem a következő tálhoz, ahol egy új játékkal találkoztam. Furcsán izgalmas érzés volt szemkontaktusba lépni egy idegennel, várva, hogy megszólal-e ismét a gong.”

unspoken and heightening curiosity about their partner's stance. This combination of unpredictability and constraint maintained attention and emotional investment throughout the loop, while suggesting that future adaptations could preserve this anticipation-driven rhythm but introduce deeper forms of opinion-sharing.

6.4.2.2 NEW! Partner Selection

Definition: Partner selection is the method by which players are grouped for interaction—whether chosen by participants, assigned by rules, or randomized. This mechanism determines whose perspectives are exchanged and how interaction patterns emerge. ↔ See Sections 6.4.2.2, 7.4.2.1, 8.4.3.3, and 10.1.1.10.

Partnering determined whose perspectives were voiced. Initially, pairs were fixed by the rotation pattern dictated by the *rhythmic random encounter* (game-assigned partner selection), ensuring structured engagement. By the fourth test session (M4_20141230), repetitive movement over several rounds reduced energy, prompting the introduction of the *earthquake* mechanism to the game. In this mode, the facilitator accelerated the gong rhythm, signaling players to break from their pair (if they wished) and choose any bowl—and thus any partner.

This shift to player-driven partner selection increased variety: some sought new contacts, others returned to known allies—reshaping who could clash and what viewpoints emerged. The design team noted that this variation re-energized the group (→ see **Player Engagement**), as self-selection encouraged both strategic and spontaneous interactions, adding a layer of agency to the communication flow.

6.4.2.3 NEW! Interaction Choice

Definition: Interaction choice refers to whether players have autonomy to engage in interactions. Games may offer moments of player choice or enforce participation through turn-taking or chance-based triggers. This design decision shapes agency, pacing, and the quality of small-group communication. ↔ See Sections 6.4.2.3, 8.4.5.1, 9.4.2.3, and 10.1.1.9.

This factor was most visible during *earthquake*, a facilitator-initiated mechanism signaled by an intensified, fast-paced gong rhythm. In contrast to earlier steps, where participation followed a fixed rhythm (deterministic) and clashes resulted from random color pairings (chance-based), *earthquake* introduced full autonomy: players could decide whether to engage at all. Some stepped into bowls matching their own color—alone or with others—thus increasing the chance of interaction, while others opted out entirely by remaining on their own.

The urgency of the accelerated rhythm forced quick decisions, prompting players to weigh their willingness and readiness to participate. This temporary shift in control revealed how interaction choice can directly influence small-group communication—by amplifying or reducing participation. While closely linked to partner selection (→ see **Partner Selection**), which determines with whom players interact, interaction choice more fundamentally defines whether they choose to engage in the first place.

6.4.2.4 NEW! Communication Modes

Definition: Communication modes are the forms through which players convey meaning in gameplay—whether verbal (spoken or written), non-verbal (gestures, eye contact), or physical (movement, props). These modes—and how they interweave—shape how information is shared, interpreted, and enacted. ↔ See Sections 6.4.2.4, 6.4.3.2 and 10.1.1.6.

This step relied almost entirely on non-verbal communication, with occasional physical contact. Non-verbal signals included eye contact, smiling, nodding, and coordinated stepping in time with the gong—cues that conveyed recognition, anticipation, or readiness without words. As one design note stated, “The game should require a high degree of use of metacommunicative signals [i.e. non-verbal communication¹⁰].”¹¹ (M3_20141219).

Physical communication, such as handshakes or forming a chain, had been envisioned in early development—“The playing partners should come into verbal (dialogue prescribed by the game) and physical contact (handshake, forming a chain) with each other.”¹² (M3_20141219)—but since strangers often played together in public settings, this element became optional. Most players opted for non-verbal greetings, while handshakes remained a matter of personal comfort (M4_20141230).

Verbal exchanges, although not prohibited, rarely occurred because the structured movement and brief encounters made sustained speech impractical. Players could only engage in verbal interaction once *party time* was declared, marking the transition to **Step 3: Opinion Clash**. By prioritizing non-verbal and physical communication modes, **Clash** created a rhythm of silent anticipation that sustained engagement and built momentum toward the verbal exchanges of the next phase.

6.4.3 Step 3: Opinion Clash

Step 3: Opinion Clash (Fig. 6.4), marks the only verbal communication about landscape issues in **Clash**.

Snapshot 3.1 illustrates the initiation of communication: the triggering player reads aloud a yes-or-no landscape question, sending a pulse—depicted by a white arrow—that centers attention and activates the communication zone (shown in red).

Snapshot 3.2 captures the simultaneous stance-taking: both players respond at the count of three with Y for “yes” or N for “no.”

This short exchange produces one of two outcomes—agreement (**Case A**, marching answers) or disagreement (**Case B**, differing answers)—decided

¹⁰ While “metacommunication” traditionally refers to implicit messages that frame or modify communication, the designers used the term to describe gestures, body language, and movement as primary interaction tools.

¹¹ „A játék igényelje a metakommunikációs jelek [értsd nonverbális] alkalmazásának minél nagyobb mértékét.”

¹² „A játszótársak kerüljenek egymással verbális (játék által előírt konkrét párbeszéd), testi kontaktusba (kézfogás, láncalkotás).”

within seconds. The verdict immediately determines whether a block is placed in the **Final Step: Constructing with Consensus** or whether the turn passes without action.

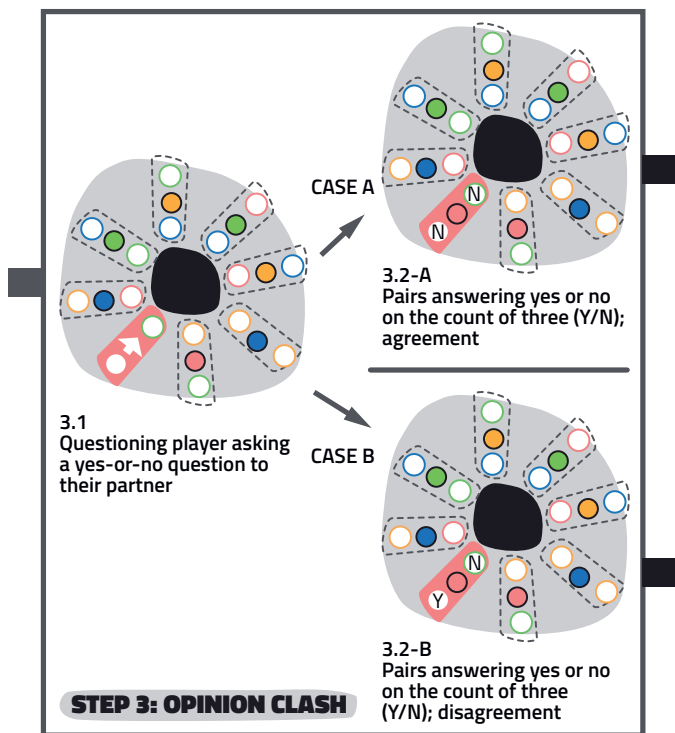


Fig. 6.4 **Clash**: Step 3: Opinion Clash. Detail from Fig. 6.1. Graphic by the author.

6.4.3.1 NEW! Landscape Pulse (Communication Topic)

Definition: Landscape pulses—also referred to as communication topics—are short prompts (e.g., questions, statements, or scenarios) that introduce a theme for discussion and shape small-group interaction toward dialogue, problem-solving, or decision-making. ↔ See Sections 6.4.3.1, 7.4.4.3, 8.4.4.1, 9.4.3.1.1, 9.4.3.2.4, and 10.1.1.2.

Unlike other educational games by kultúrAktív Association that used scenario cards to guide players toward predetermined actions (Tóth, 2015; Tóth & Poplin, 2014, June 3–6), **Clash** (as part of **Urbanity**) employed yes-or-no questions about urban transformation, prompting players to confront their own opinions: “The game should engage with environmental design topics relevant to the players, relying on a method that facilitates the confrontation of differing viewpoints instead of conveying predetermined assertions.”¹³ (M3_20141219).

13 „Foglalkozzon a játékosokat érdeklő környezet alakítási kérdésekkel, szentenciák helyett a játékosok véleményének ütköztetésének módszerével.”

Questions were intentionally “[...] thought-provoking, confrontational, and debate-starting”¹⁴ (M3_20141219) on “urban / social problems”¹⁵ (M5_20150110). To sustain flow, they were kept simple for quick comprehension (M2_20141210), open-ended so they “should not suggest the correct answer”¹⁶ (M3_20141219), and engaging enough to motivate stance-taking (M4_20141230). Their “ambiguous, debate-starting”¹⁷ (M5_20150110) nature encouraged curiosity and rapid opinion exchange without lengthy reasoning. Early versions allowed players to select topics based on personal interest, while later iterations introduced random assignment to maintain pacing.

6.4.3.2 Communication Modes

Definition: Communication modes are the forms through which players convey meaning in gameplay—verbal (spoken or written), non-verbal (gestures, eye contact), or physical (movement, props). These modes—and how they interweave—shape how information is shared, interpreted, and enacted. ↔ See Sections 6.4.2.4, 6.4.3.2 and 10.1.1.6.

In **Step 3**, communication shifted from the non-verbal and physical focus of **Step 2** to a highly constrained verbal mode. Language became explicit but remained limited: players could only respond with “yes” or “no,” preventing elaboration or negotiation. The human voice replaced bodily gesture as the main communication channel, while written question cards provided the verbal trigger. Players read the question aloud, after which “players must call out their answers on the count of three, simultaneously”¹⁸ (M4_20141230).

This structure ensured simultaneity and fairness but eliminated discussion. Verbal expression functioned as a performative cue rather than an exchange—an audible moment that finalized stance-taking before the game rhythm moved on.

6.4.3.3 NEW! Ritualized Expression

Definition: Ritualized expressions are game-specific, repeated gestures or cues—such as simultaneous hand raises or movements—that carry shared meaning. These actions form a symbolic language that streamlines communication and reinforces group cohesion. ↔ See Sections 6.4.3.3, 8.4.2.1, and 10.1.1.4.

Clash embedded ritualized expression directly in its stance-taking mechanic. On the count of three, both players simultaneously voiced their answers (yes/no). Later iterations replaced the spoken response with a gesture—raising a hand for “yes” or lowering it for “no.” This synchronized movement created

14 „[...] elgondolkoztató, szembesítő, vitaindító”

15 „városi / társadalmi problémák”

16 „ne sugallják a helyes választ”

17 „nem egyértelmű, vitaindító”

18 „a játékosoknak háromra, egyszerre kell bemondani a válaszaikat”

a visible, collective rhythm that was immediately legible to both players and observers, soon referred to as the *opinion clash*.

Through repetition, these gestures became automatic, creating a ritualized pattern that unified the group while preserving the speed of communication.

6.4.3.4 Player Engagement

Definition: Player engagement refers to the emotional involvement, anticipation, and curiosity that emerge during gameplay—elements that strongly influence how actively and meaningfully participants contribute to small-group communication. ↔ See Sections 6.4.2.1, 7.4.4.9, 7.4.6.2, 8.4.3.2, 9.4.3.2.1, and 10.1.3.8.

Whereas **Step 2: Rhythmic Random Encounters** derived excitement from uncertainty about whom players would meet, **Step 3** generated engagement through the immediacy and constraint of verbal exchange. Players had only seconds to decide and respond before the game moved on—without explanation or dialogue.

“During a party-situation, the game paused, and we listened to the partying team’s question and their answers. I ended up in a party round too once. The question really caught me off guard: ‘Do you think a tram is an eco-friendly vehicle just because the lignite used to generate its electricity is burned somewhere else?’ Even so, I had to take a stance by the count of three—so I made a quick judgment and answered. I can’t remember whether we agreed or got a point. What I do remember is being really curious about what was behind my partner’s answer. I recall thinking it was a shame we had to move on—a shame I couldn’t find out why they thought that way.”¹⁹ (M6_20150124).

This forced brevity produced “frustration.” curiosity persisted even after the exchange ended. The experience later inspired the **Parliament** prototype, which extended **Clash**’s rapid stance-taking into open debate.

6.4.3.5 NEW! Communicative Roles

Definition: Communicative roles are the functional positions players assume during interaction—such as speaker, addressee, or observer—that guide how dialogue flows within small groups. These roles influence who contributes, who listens, and who reflects, shaping participation dynamics. ↔ See Sections 6.4.3.5, 7.4.1.2, 8.4.4.3 and 10.1.1.5.

During the *opinion clash*, each member of the active pair simultaneously acted as both speaker (expressing a stance) and addressee (interpreting the partner’s stance). All others temporarily shifted into observers. While this ensured

19 „Bulihelyzetben leállt a játék, és meghallgattuk a bulizó csapat kérdését és válaszait. Egyszer én is bulihelyzetbe kerültem. Elég váratlanul ért a kérdés: „Szerinted a villamos környezetbarát jármű attól, hogy az áramhoz szükséges lignitet máshol égetik el?” Háromra mégis állást kellett foglalnom, hát gyorsan mérlegeltem, és válaszoltam. Már nem emlékszem, hogy egyezett-e a véleményünk vagy sem, kaptunk-e pontot vagy sem. Csak arra emlékszem, hogy furdalt a kíváncsiság, hogy mi áll a párom válasza mögött. Emlékszem, azt gondoltam, hogy kár, hogy tovább kell állnunk, kár, hogy nem tudom, miért gondolja így.”

clarity for the active pair, it also created a division between active and passive participants.

Playtest feedback suggested eliminating the passive role altogether: “It was suggested to include spaces where not just one pair, but everyone would have to answer a given question simultaneously.”²⁰ (M4_20141230). This proposed adjustment would transform the structure so that all players become active speakers and addressees, broadening participation and collective engagement.

6.4.4 Final Step: Constructing with Consensus

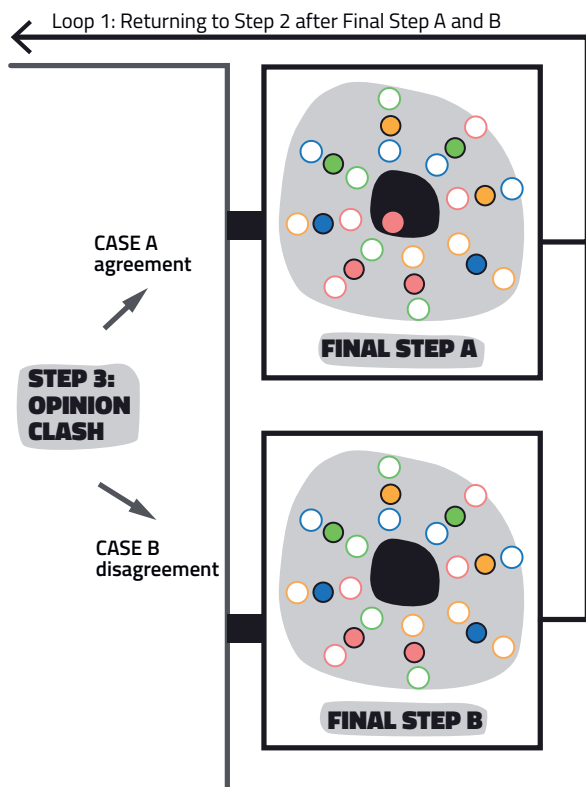


Fig. 6.5 *Clash*: Final Step: Constructing with Consensus. Detail from Fig. 6.1. Graphic by the author.

The **Final Step: Constructing with Consensus** (Fig. 6.5) concludes each *opinion clash* by transforming verbal stance-taking into a visible and collective outcome. The city model grows only through shared understanding, while disagreement leaves tangible gaps—turning communication into spatial form.

Final Step A: Construction & Turn-Taking depicts the agreement case: when both players give the same answer, the initiating player places a colored

20 „Felmerült, hogy legyenek olyan mezők, ahol nemcsak egy párnak, hanem mindenkinek egyszerre kell választ adni egy adott kérdésre.”

construction block—matching their team’s color—onto the central black game board. This action visually represents a successful consensus and a collective contribution to the shared structure.

Final Step B: No Construction & Turn-Taking shows the disagreement case: when answers differ, no block is placed.

In both outcomes, the black arrows indicate the looping structure of game-play—returning the process to **Step 2**, where new pairings and potential *opinion clashes* can emerge.

6.4.4.1 NEW! Scoring System

Definition: Scoring systems are the mechanics that reward player actions and track progress. They shape how participants perceive success and steer communication toward specific dynamics—such as competition, cooperation, or consensus—depending on how outcomes are incentivized. ↔ See Sections 6.4.4.1, 7.4.6.1, 8.4.7.1, 9.4.5.1, and 10.1.1.11.

In **Clash**, the scoring system was deliberately designed to minimize chance and emphasize the consequences of decision-making. As the design notes stated, “Chance should play as small a role as possible, while the players’ decisions should have more. Thus, for example, there should be no dice rolling in the game.”²¹ (M2_20141210).

Consensus was rewarded—“the player receives a building block when there is agreement”²² (M2_20141210)—and chosen as the mechanism for city construction: “By the end of the game, something that has been constructed during the game should be completed.”²³ (M3_20141219).

This direct link between communication and scoring reinforced constructive cooperation over competition. While the game included a light team-based rivalry—“The players should compete with each other for victory, yet at several points in the game, they can only advance with each other’s help, through cooperation”²⁴ (M3_20141219)—its core structure remained collaborative: “Let it be a team game.”²⁵ (M3_20141219).

6.4.5 Facilitation Tasks

Although the facilitator is not explicitly depicted in the visual analysis (Fig. 6.1), their presence is embedded within the game’s structure—symbolized by elements such as the gong, rotation arrows, and looping rhythm. In **Clash**

21 „Minél kisebb szerepet kapjon a véletlen, minél többet a játékosok döntései. Így kockadobás pl. ne legyen a játékban.” (M2_20141210)

22 „akkor jut építőelemhez a játékos, ha egyetértenek” (M2_20141210)

23 „A játék végére készüljön valami a játék során épülő alkotás.”

24 „A játékosok egymással versengve a győzelemre törjenek, de a játék során több esetben csak egymás segítségével, egymással együttműködve tudjanak csak továbbjutni.”

25 „Legyen csapatjáték.”

facilitation operated largely from the background, yet it was crucial in maintaining the balance between structure and spontaneity. The facilitator acted as a temporal and procedural anchor, ensuring that the rhythm of movement, verbal exchange, and construction remained coherent across all steps.

Three facilitation tasks proved particularly influential on small-group communication:

- **Enforcing Game Rules:** Communicating and maintaining the rules to ensure that interactions remain structured, fair, and rhythmically synchronized.
- **Flow Management:** Controlling the pacing and supporting smooth shifts between communication phases.
- **Sustaining Management:** Monitoring group energy and introducing adaptive interventions to prevent passivity and maintain focus.

Together, these facilitation practices ensured that **Clash** could balance its minimalist design with dynamic group responsiveness—keeping communication organized yet alive.

6.4.5.1 NEW! Enforcing Game Rules

Definition: Enforcing game rules refers to the facilitator’s task of maintaining the communicative structure intended by the game design. In serious participatory landscape games, rules are not merely procedural—they define who speaks, when, and how dialogue unfolds. Facilitators safeguard this balance between order and openness. ↔ See Sections 6.4.5.1 and 10.2.2.

In **Clash**, facilitators maintained order and rhythm by introducing and reinforcing the rules at the start of each session. Because the gameplay was intuitive, most facilitation was observational, with minimal intervention. However, when confusion arose—such as uncertainty about movement timing or the direction of rotation—the facilitator stepped in to clarify.

Crucially, they ensured adherence to the *opinion clash* pattern: structured, simultaneous yes/no responses delivered on the count of three. This prevented unstructured discussion, maintaining the sharp, rhythmic exchanges that defined the game’s communicative identity.

6.4.5.2 NEW! Managing Transitions

Definition: Managing transitions refers to the facilitator’s responsibility for pacing and coordinating shifts between communication phases, helping players adapt to new roles, formats, or spatial configurations. ↔ See Sections 6.4.5.2 and 10.2.4.

Clash consisted of four communication steps: **Step 1: Pairing Players** non-verbal team formation; **Step 2: Rhythmic Random Encounters** physical rotation and anticipation; **Step 3: Opinion Clash** verbal stance-taking; and **Final Step: Constructing with Consensus** symbolic visualization of outcomes.

The facilitator orchestrated these transitions, using the gong and brief verbal cues to mark the end of one step and the beginning of another. They occasionally re-explained rules during *party time*, ensuring players understood when and how to engage verbally. By pacing transitions deliberately, facilitators maintained flow and prevented moments of confusion or disengagement, transforming potential pauses into structured rhythm.

6.4.5.3 NEW! Sustaining Engagement

Definition: Sustaining engagement refers to the facilitator's adaptive interventions that preserve motivation, focus, and participation. By refreshing energy and preventing passivity, this task keeps small-group communication lively, inclusive, and responsive. ↔ See Sections 6.4.5.3 and 10.2.7.

In *Clash*, maintaining engagement required careful attention to group dynamics. Facilitators observed players' emotional and physical cues—smiles, posture, volume, and rhythm—and acted when energy began to drop. The most distinctive facilitator intervention was *earthquake* (M4_20141230), marked by an acceleration of the gong's pace that temporarily broke the rotation rhythm. This surprise element forced players to move unpredictably and reorganize, producing new pairings and renewed interactions. By introducing this controlled disruption, facilitators reactivated attention and curiosity, restoring momentum while preserving the game's structure.

6.5 Social Constructivist Landscape Theory Analysis

This section interprets the *Clash* prototype through the lens of social constructivist landscape theory, examining how rapid, embodied interaction shaped the social construction of landscape meanings during gameplay.

The analysis follows two analytical dimensions introduced in Section 4.4.2.3: (1) the processes through which landscape meanings emerge through communication (Section 6.5.1), and (2) the mediation of differentiated knowledge stocks shaped by landscape socialization (Section 6.5.2). Together, these perspectives allow for an interpretive reading of how immediacy, affective engagement, and structural constraints shaped early stages of landscape meaning-making, while limiting the negotiation and stabilization of shared meanings.

6.5.1 Processes of Landscape Meaning-Making through Communication

During gameplay, *Clash* encouraged participants to articulate landscape-related meanings through rapid, nonverbal, and rhythm-driven interaction rather than extended deliberation. These interactions resonate with central ideas in social constructivist landscape theory, particularly Kühne's (2015b, p. 29) process-oriented understanding of landscape construction and Berger and Luckmann's (1966) concept of externalization as an initial phase of meaning-making.

In the initial phase of the game, players were paired and positioned within the spatial setup of the bowls (**Step 1: Pairing Players**). While no explicit landscape-related discussion occurred at this point, these pairings established the immediate social context for subsequent interaction and shaped which perspectives encountered one another during gameplay. This was followed by rhythmic random encounters, in which players continuously rotated between stations in response to gong signals (**Step 2: Rhythmic Random Encounters**). These synchronized movements generated emotional alertness and anticipatory tension, creating an embodied readiness for interaction rather than reflective deliberation.

Landscape meaning-making was triggered when party time was announced and players were confronted with landscape-related yes-or-no questions (**Step 3: Opinion Clash**). At this moment, participants were required to rapidly interpret the issue at hand and to externalize their stance through binary positioning and gestures. This communicative moment corresponded to the externalization of individually actualized landscape perceptions, as players projected intuitive judgments into a shared interactional space. Immediate projection and feedback occurred through the recognition of agreement or disagreement with one's partner.

When players' answers matched, this momentary alignment was translated into a symbolic construction action on the shared city map (**Final Step: Constructing with Consensus**). However, this act functioned as a procedural closure rather than as the stabilization of negotiated meanings. The communicative structure of **Clash** did not provide space for verbal justification, contestation, or iterative feedback. As a result, meaning-making remained situated at the level of instantaneous externalization, without progressing toward objectivation or internalization in Berger and Luckmann's sense.

Taken together, these communicative moments illustrate how **Clash** successfully activated early stages of landscape meaning-making by fostering emotional readiness and rapid stance-taking, while structurally limiting the negotiation and stabilization of shared meanings. The gameplay thus demonstrates how affective and interactional immediacy can initiate meaning-making processes, while also highlighting why later prototypes introduced extended deliberation and dialogic exchange.

The following subsections examine selected aspects of this process in more detail, focusing on emotional readiness, instantaneous externalization, and the structural limits of dialogue within the **Clash** prototype.

6.5.1.1 Rhythmic Encounters and Emotional Readiness

Player interactions were orchestrated through synchronized movement cues (gong sounds), requiring participants to rotate dynamically between stations. These rhythmic encounters fostered emotional attunement and anticipatory attention, priming players for moments of meaning-making. As one participant recalled: "At the sound of the gong, I stepped to the right to the next bowl, where I met a new player. It was a strangely thrilling feeling to make

eye contact with a stranger, waiting to see if the gong would sound again.”²⁶ (M6_20150124).

This rhythm-induced alertness generated the affective tension necessary for quick interpretation and response—an embodied readiness that prepared players for cognitive engagement.

6.5.1.2 Opinion Clashes and Instantaneous Meaning-Making

The construction of landscape meanings primarily emerged when *party time* was triggered, as players confronted landscape-related yes-or-no questions and rapidly externalized their stances: “The question caught me off guard: ‘Do you think a tram is an environmentally friendly vehicle just because the lignite needed for the electricity is burned elsewhere?’ Still, I had to take a stance by the count of three, so I quickly weighed my options and gave an answer. I don’t remember whether we agreed or not, or if we earned a point. I only remember being consumed with curiosity about what was behind my partner’s answer. I remember thinking it was a pity that we had to move on, a pity that I couldn’t know why they thought that way.”²⁷ (M6_20150124).

This moment reveals the simultaneous activation of emotional and cognitive engagement and the frustration of unfulfilled dialogue. Players expressed intuitive stances but lacked opportunities to explain or reconcile divergent views, limiting the process to the stage of externalization.

6.5.1.3 Structural Limits and Transition Toward Dialogue

Clash thus functioned as a vivid, emotionally charged starting point for landscape meaning-making, but its nonverbal, fast-paced format restricted deeper negotiation and stabilization of shared meanings. The absence of structured verbal dialogue meant that individually externalized meanings could not evolve into socially shared landscapes. These constraints informed the design of the subsequent **Parliament** prototype, which introduced extended verbal exchanges and iterative reflection.

6.5.2 Mediation of Differentiated Knowledge Stocks through Game Structures

Participants in **Clash** brought differentiated knowledge stocks shaped by their life experiences, education, and professional affiliations. Most had undergone tertiary landscape socialization as urban planners, architects, or built-environment

26 „A gongra jobbra léptem a következő tálhoz, ahol egy új játékkal találkoztam. Furcsán izgalmas érzés volt szemkontaktusba lépni egy idegennel, várva, hogy megszólal-e ismét a gong.”

27 „Elég váratlanul ért a kérdés: „Szerinted a villamos környezetbarát jármű attól, hogy az áramhoz szükséges lignitet máshol égetik el?” Háromra mégis állást kellett foglalnom, hát gyorsan mérlegeltem, és választottam. Már nem emlékszem, hogy egyezett-e a véleményünk vagy sem, kaptunk-e pontot vagy sem. Csak arra emlékszem, hogy furdalt a kíváncsiság, hogy mi áll a párom válasza mögött. Emlékszem, azt gondoltam, hogy kár, hogy tovább kell állnunk, kár, hogy nem tudom, miért gondolja így.”

educators (Kühne, 2008a, 2019a; 2019b, pp. 61–64), carrying substantial professional and biographical expertise into the game.

Yet the stepwise structure of **Clash** mediated these knowledge stocks in ways that favored immediacy and surface-level expression over deliberation and reflection:

- **Step 1: Pairing Players** randomly assigned partners across four color-coded teams. This ensured diversity of encounters but prevented continuity with the same partner, keeping interactions fragmented (→ see **Interaction Choice, Partner Selection**).
- **Step 2: Rhythmic Random Encounters** required constant rotation at the sound of the gong.
- **Step 3: Opinion Clash** compressed expression into simultaneous yes/no gestures. Players could signal their stance but had no opportunity to explain, challenge, or refine it (→ see **Ritualized Expression, Communication Modes**). As one participant described (cf. M6_20150124; see Section 6.5.1.2), they were left curious about what was behind their partner's answer but unable to explore it further. This encapsulates how deeper reasoning and professional perspectives remained implicit—curiosity was triggered but structurally cut off.
- **Final Step: Constructing with Consensus** translated matching answers into a material act—placing a block on the city map. This ritual reinforced closure but further simplified complexity, as consensus was based on surface agreement rather than argumentation.

Through this sequence, **Clash** maximized diversity of encounters but reduced them to binary outputs without dialogic depth. Knowledge stocks were present in the room but largely latent: participants carried professional and biographical insights, yet the rules channeled these into momentary stances rather than articulated arguments. In effect, **Clash** mediated knowledge by amplifying immediacy and affective resonance while suppressing reflective or disciplinary contributions.

6.6 Communicative Action Theory Analysis

This section analyzes the **Clash** prototype through the theory of communicative action, examining how its communicative structure achieved by game design and facilitation shaped equality, reasoning, and consensus.

The analysis follows three analytical dimensions introduced in Section 4.4.2.3: equitable participation (Section 6.6.1), reason-giving procedures (Section 6.6.2), and coherence and depth of agreement (Section 6.6.3).

6.6.1 Equitable Participation

Habermas's ideal speech situation presupposes freedom from coercion and equal opportunities for participation, where arguments—not authority—determine

influence. **Clash** created a communication environment that supported the procedural equality necessary for the ideal speech situation through rhythm, pairing, and spatial symmetry through game design and facilitation.

6.6.1.1 Game Design

The game's structure promoted equality of access primarily through its choreographed spatial and pairing design:

- **Step 1: Pairing Players:** Participants chose a colored bowl around the circular board, automatically forming one-to-one pairs. The arrangement ensured equal distance, visibility, and attention between players (→ see **Space Layout, Player Proximity, Player Visibility**), allowing every encounter to begin on balanced terms.
- **Step 2: Rhythmic Random Encounters:** Movement followed the gong's rhythm, rotating partners in a sequence that combined fairness and unpredictability (→ see **Interaction Choice, Group Division**). The later earthquake mechanism, allowing self-selection of partners, momentarily shifted equality into the social sphere: autonomy increased, but confidence and familiarity began to influence pairing (→ see **Player Relationships, Player Engagement, Partner Selection**).
- **Step 3: Opinion Clash:** Once *party time* was triggered, each pair responded simultaneously to a yes-or-no question or landscape pulse (→ see **Landscape Pulse, Communication Rules, Ritualized Expression**). The synchronous gesture or brief verbal answer gave every player easy access without hierarchy to express its opinion.

6.6.1.2 Facilitation

Facilitation added little beyond timekeeping and rule enforcement (→ see **Enforcing Game Rules, Managing Transitions, Sustaining Engagement**). The rhythm itself maintained fairness, facilitators simply supported the structure already provided by the design as there was no need to balance hierarchy among players who knew already each other but without existing power relationships (→ see **Player Relationships**).

6.6.2 Reason-Giving Procedures

This dimension examines whether gameplay enabled participants to articulate and test reasons—the procedural foundation of rational discourse. According to Habermas, communicative rationality depends on mutual testing of validity claims: truth, normative rightness, and sincerity.

6.6.2.1 Procedural Framework and Communication Patterns

Clash structured landscape communication through four sequential steps. Together these steps choreographed a rhythm of movement and stance-taking that replaced verbal dialogue with bodily expression. Players took their positions (**Step 1**) and were matched into temporary communication situations through

Step 2: Rhythmic Random Encounters, leading directly into brief exchanges of opinion in **Step 3: Opinion Clash**.

As a result, the game only produced the *opinion clash* pattern as the only form of communication pattern about landscape issues and no sustained rational argumentation could develop.

6.6.2.2 Rational Argumentation and Engagement with Validity Claims

The closest approximation appeared in **Step 3: Opinion Clash**, when paired players responded simultaneously to a yes-or-no question—the landscape pulse (→ see **Landscape Pulse, Ritualized Expression, Communication Modes, Communication Rules**). On the count of three, both expressed their stance by voice or gesture, then immediately rotated to a new partner.

This ritualized exchange externalized difference but allowed no justification, challenge, or elaboration. Among Habermas's three validity claims, only *sincerity* could be realized: players expressed genuine opinions drawn from experience rather than from strategy, as no tactical play behavior was observed (→ see **Player Authenticity**). One participant reflected, "I remember thinking it was a pity that we had to move on, a pity that I couldn't know why they thought that way."²⁸ (M6_20150124). The format evoked curiosity about reasoning while structurally preventing it. **Clash** therefore fulfilled only the initial layer of communicative rationality—authentic expression without the capacity for reason-giving or critique.

Differences in lifeworld background (→ see **Player Diversity, Player Affiliation**) most probably influenced the stances of professional answering yes-or-no questions intuitively through disciplinary assumptions. Yet, since the prototype did not allow for justification, these backgrounds never entered dialogue. **Clash** therefore achieved only the first layer of communicative rationality—authentic expression without argumentation—providing a baseline from which later prototypes expanded toward reason-giving.

6.6.2.3 Facilitation and Support for Rational Argumentation

In **Clash**, facilitation focused primarily on maintaining procedural flow rather than supporting reasoning. Facilitators ensured that the rhythm of movement, pairing, and timing followed the rule sequence (→ see **Enforcing Game Rules, Managing Transitions**). As the *opinion clash* consisted of synchronized gestures without speech, moderation could not influence the quality of reasoning—its task remained logistical.

6.6.3 Coherence and Depth of Agreement

Agreement in **Clash** emerged in **Step 3: Opinion Clash** and symbolically materialized in the **Final Step: Constructing with Consensus** (→ see **Symbolism in Gameplay, Scoring System**). When both players signaled the same stance,

²⁸ „Emlékszem, azt gondoltam, hogy kár, hogy tovább kell állnunk, kár, hogy nem tudom, miért gondolja így.”

they placed magnetic blocks on the shared city model. This visualized agreement but reduced it to simultaneity of action.

Because players could not explain or test their reasoning, **Clash** produced *Übereinstimmung* (procedural concurrence) or emotional resonance (*Gleichgestimmtheit*) rather than communicative understanding. The resulting city embodied visible harmony without shared justification.

Clash revealed how equality and sincerity can exist without deliberation. It represented the lowest threshold of communicative action in the design sequence: inclusion without reasoning, expression without dialogue, and consensus as alignment rather than understanding.

7

Small-Group Communication in *Parliament*

Developed in spring 2015 during Phase II of the *Urbanity* project, *Parliament* shifted the focus toward structured deliberation, representative decision-making, and symbolic construction. It was the first prototype to introduce the complete *Urbanity* system—question cards, magnetic points, and six buildings for collaborative city-making.

The chapter reconstructs the prototype's development (Section 7.1) and gameplay structure (Section 7.2), followed by a visual analysis of communication patterns (Section 7.3), a thematic analysis of influential design and facilitation factors (Section 7.4), and theoretical reflection through social constructivist landscape theory (Section 7.5) and communicative action theory (Section 7.6).

7.1 Prototype Development and Testing

Parliament evolved from the earlier prototype *Gate*, introduced during workshop M6, where players advanced through symbolic “gates” by reaching consensus on landscape questions (Table 7.1). Developed partly in parallel with *Clash*, it took shape as a deliberative, team-based game incorporating democratic procedures—team *opinion clashes*, delegate roles, *voting rituals*, and symbolic construction with magnetic blocks.

The format was formalized during workshops M7–M8 and selected for public presentation at the *OFF-Biennale Budapest* (M9). The final development phase (M10–M11) focused on clarifying the rules, finalizing a complete set of yes-or-no question cards, and organizing gameplay into six thematic categories.

Visual and material elements were refined iteratively: magnetic construction points (E_20150323; E_20150430a), color-coded buildings (E_20150420; E_20150427a), and a schematic game board (E_20150430b; E_20150507). Finally, the game was published on the *Urbanity* project website (E_20150416b; E_20150427b; E_20150428; E_20150501; E_20150505a; E_20150506; E_20150519; Urbanity, n.d.).

Testing occurred across multiple contexts and participant groups (E_20150513b; E_20150514; E_20150515; E_20150518a–c; E_20150521b; E_20150526b–c), including expert game sessions, public street events, and classroom-based play with high school students (T1–T14, Table 7.2). The diversity of settings demonstrated the game's adaptability to a wide range of spatial, social, and institutional environments.

Table 7.1 *Parliament*: Game development workshops. Table by the author.

Workshop Nr.	Brief description of the event
M6_20150124 (Phase I)	<i>Gate</i> introduced with a concentric-circle board. Players advanced by consensus on yes-or-no questions at symbolic gates.
M7_20150207 (Phase I)	<i>Parliament</i> emerged as an evolution of <i>Gate</i> , featuring team-based opinion clashes, delegate nomination, and central voting. Construction points awarded for successful votes.
M8_20150224 (Phase I)	Internal evaluation of <i>Clash</i> and <i>Parliament</i> using OFF-Biennale criteria and engagement benchmarks.
M9_20150308 (Phase II)	<i>Parliament</i> selected for OFF-Biennale. Rule refinement began, including construction mechanics and consideration of online formats.
M10_20150311 (Phase II)	Remote collaboration finalized the yes-or-no question sets. City-building themes were structured.
M11_20150319 (Phase II)	Rules revised based on testing (T1). Opinion clash rituals reintroduced. Final components completed. Six thematic categories established. (written/unwritten rules, design/art, urban planning/urban rehabilitation, neighborliness, infrastructure, urban ecology).

Table 7.2 *Parliament*: Play tests. Table by the author.

Gameplay Nr.	Brief description of the event	Player Nr.	Age of Players	Place played
T1_20150314	kultúrAktív club day: semi-public session with members and friends	1-6	Adults	Indoor
T2_20150418	kultúrAktív club day: semi-public session with members and friends	7-15	Adults	Indoor
T3_20150510	kultúrAktív club day: semi-public session with members and friends	7-15	Adults	Indoor
T4_20150512	OFF-Biennale Budapest: organized session with high school class, Horváth Mihály Square (8th District)	16-35	High school	Public space
T5_20150513	OFF-Biennale Budapest: organized session with high school class, Leonardo Community Garden (8th District)	16-35	High school	Community garden
T6_20150517	OFF-Biennale Budapest: public play, Rákóczi Square (8th District)	1-6	Adults	Public space
T7_20150517	OFF-Biennale Budapest: public play, Kamermayer Rárolly Square (5th District)	1-6	Mixed	Public space
T8_20150517	OFF-Biennale Budapest: public play with passersby, Erzsébet Square (5th District)	1-6	Mixed	Public space
T9_20150524	OFF-Biennale Budapest: public play, Klauzál Square (7th District)	7-15	Mixed	Public space

Gameplay Nr.	Brief description of the event	Player Nr.	Age of Players	Place played
T10_20150524	OFF-Biennale Budapest: mixed play (organized and pedestrian), Szabadság Square (5th District)	1-6 7-15	Mixed	Public space
T11_20150531	OFF-Biennale Budapest: public play with families during Children's Day, Margaret Island (13th District)	1-6	Mixed	Public space
T12_20150605	kultúrAktív team building: dormitory garden, Agricultural University, Gödöllő	1-6	Mixed	Dormitory garden
T13_20150606	kultúrAktív team building: organized session with local biking club, main square, Gödöllő	7-15	Mixed	Public space
T14_20150612	School class: school session (initially planned for OFF-Biennale, 9th District)	16-35	High school	Indoor space

7.2 Game Concept and Rules

Parliament marks a turning point in the **Urbanity** series, establishing the visual and material structure continued in later prototypes. It introduces six clearly defined communication steps that guide players through a cycle of *debate*, *voting*, and symbolic city-making. These steps not only scaffold gameplay but also frame evolving patterns of small-group interaction.

The core components—abstract city board, magnetic buildings, question cards, and construction points—first appear here and are carried forward into **Tactic Dice** and **Tactic Card**.

Three rule variants support different facilitation settings (Table 7.3):

- **Rulebook Parliament** (general guide)
- **Indoor Parliament** (controlled environment)
- **Street Parliament** (adapted for outdoor public sessions)

Table 7.3 **Parliament:** Comparative analysis of its variants. Table by the author.

Communication Step	Rulebook Parliament	Indoor Parliament	Street Parliament
Step 1: Teaming Up	7-15 players form 3-6 teams	Same as Rulebook Parliament	Difference 1: 1-6 players form 1-3 teams; facilitator joins if needed to balance teams
Step 2: Opinion Clash in Teams	Teams clash questions one by one; once consensus is reached on a question, the game proceeds to the next step	Difference 1: All questions are clashed at once, followed by pre-discussion; once all teams select their questions, the game proceeds.	Difference 2: Same as Indoor Parliament

Communication Step	Rulebook Parliament	Indoor Parliament	Street Parliament
Step 3: Opinion Clash in Delegates' Forum & For All	Only team delegates participate in the opinion clash	Same as Rulebook Parliament	Difference 3: All players participate in the opinion clash due to small group size and need for inclusivity
Step 4: Defense Speech & Free Debate	Delegate of the questioning team delivers a 1-minute defense speech	Difference 2: Any team member may deliver the defense speech ; followed by open debate among all players	Difference 4: All players participate in spontaneous, open debate (no fixed speaker roles)
Step 5: Voting	All players vote "yes" or "no;" no vote changes observed	Difference 3: Same voting method, but players appeared to change their minds after the debate	Difference 5: Same as Indoor Parliament , but even questioning team members changed their votes after the debate
Final Step: Constructing with Consensus	Scoring reflects majority vote outcome (yes/no)	Difference 4: Scoring reflects level of agreement with the questioning team's position, not simple majority	Difference 6: Same as Indoor Parliament
Flow and Rotation	Teams return to Step 2	Difference 5: Since all consensus questions were selected at once in Step 2 , gameplay continued directly through Step 3 , with each round initiated by a new team's pre-selected question	Difference 7: Same as Indoor Parliament

7.2.1 Game Setup

Players gather around a centrally placed abstract city board featuring six gray magnetic buildings, each representing a thematic category: *livable city*, *renewing city*, *caring city*, *smart city*, *sustainable city*, and *self-organizing city*. Teams select a category by standing behind the corresponding building.

Each team receives 16 theme-based yes-or-no question cards and 16 magnetic construction points. Up to six teams can play simultaneously, positioning themselves physically around the chosen topics to mark their initial stance in the discussion space.

7.2.2 Goal of the Game

Teams aim to construct the city by earning construction points through face-to-face consensus with delegates of other teams. When consensus is not reached, they can attempt to recover points through *defense speeches* or *open debate*.

Roles rotate each round, ensuring equal opportunities to score. The team with the highest number of construction points at the end of the game wins.

7.2.3 Communication Steps

The rule logic of *Parliament* is organized into six communication steps that combine structured deliberation and symbolic construction.

- **Step 1: Teaming Up:** Players form teams, select thematic categories, position themselves around the board, and assign internal roles: questioner, responder, and delegate.
- **Step 2: Opinion Clash in Teams:** Each team selects a question through internal *opinion clash*. The questioner reads a card aloud, and teammates respond simultaneously using hand gestures—raising a hand for “yes,” squatting for “no.” The team chooses one consensus question to carry forward to the next step.
- **Step 3: Opinion Clash in Delegates’ Forum:** The questioning team’s delegate presents the selected question for a yes-or-no vote among all delegates.
- If consensus is reached → proceed to **Final Step: Constructing with Consensus**, then return to **Step 2**.
- If not → proceed to **Step 4**.
- **Step 4: Defense Speech & Free Debate:** The questioning delegate delivers a short *defense speech* to advocate their team’s stance. In the *Indoor* and *Street* variants, this may be followed by an *open debate* involving all players.
- **Step 5: Voting:** All players vote simultaneously using hand gestures. The result determines the construction outcome.
- **Final Step: Constructing with Consensus:**
 - *Rulebook* variant: The winning position (“yes” or “no”) is visualized in the cityscape.
 - *Indoor/Street* variants: Points are awarded proportionally according to agreement with the questioning team’s stance.
 - → In all cases, gameplay returns to **Step 2**.

The game continues until all question cards have been used or the time limit is reached. Beyond competition, *Parliament* emphasizes the practice of reasoned argumentation, representation, and consensus-building as symbolic acts of city-making.

7.3 Visual Analysis of the Small-Group Communication Process

This section visually analyses how small-group communication unfolded in *Parliament*, following the analytical framework introduced in 4.4.2.1. While the rulebook defines a procedural communication structure, the actual communication process developed differently depending on the setting in which the game was played.

To capture these differences, the analysis distinguishes three versions of the prototype: *Rulebook Parliament* (Fig. 7.1), *Indoor Parliament* (Fig. 7.2), and *Street Parliament* (Fig. 7.3). Each version represents a distinct configuration of gameplay conditions that shaped how communication around landscape issues evolved during play. The legends provided in the foldout diagrams (Figs. 7.1–7.3) serve as reference keys for interpreting the visual analyses presented in the following subsections.

Each subsection (Sections 7.3.1–7.3.3) examines one of these variants from four analytical perspectives: temporal progression, spatial activation, forms of landscape-related dialogue, and the role of facilitation.

Together, these visual analyses provide the basis for the thematic exploration presented in Section 7.4 and contribute to the cross-case comparison and the *Communication Pattern Analysis Method* in Chapter 11.

7.3.1 *Rulebook Parliament* Variant

Fig. 7.1 *Rulebook Parliament*: Visual analysis of the small-group communication process. Foldout diagram with legend (see pocket at the end of the volume). The legend applies to all diagrammatic detail views in Chapter 7. Graphic by the author.

Fig. 7.1 visualizes how small-group communication unfolds in the *Rulebook Parliament* version, outlining its temporal rhythm, spatial configuration, and structured approach to landscape dialogue.

7.3.1.1 Temporal Structure: Steps, Snapshots, and Looping Rhythm

Gameplay progresses through five communication steps (grey boxes), concluding in one of two *Final Steps* (black boxes).

Two black arrows mark the looping system:

- **Loop 1:** If delegates reach consensus in *Step 3*, the game proceeds to *Final Step A*, and loops back to *Step 2*.
- **Loop 2:** If disagreement arises in *Step 3*, the process moves through *Step 4: Defense Speech* and *Step 5: Voting*, then proceeds to *Final Step B* or *C* before looping back to *Step 2*.

An additional internal loop appears within *Step 2*, showing repeated internal *opinion clashes* until consensus is reached—slowing pacing at the start but increasing reflective engagement.

7.3.1.2 Communication Zones and Spatial Activation

Interaction unfolds through the sequential activation of four communication zones, each representing a distinct mode of engagement:

- **Core zone:** The central board remains inactive until the **Final Step**, where symbolic construction concludes the round.
- **Team zones:** Dashed gray circles in **Step 2** mark internal team areas where participants engage in *opinion clashes*; each zone is colored according to team identity.
- **Delegates' forum:** Activated in **Step 3**, this central space hosts *opinion duels* between selected representatives of different teams.
- **Full-group zone:** Engaged during **Steps 4** and **5**, this outer area allows all players to participate in *defense speeches* and *collective voting*.

As the game advances, communication zones expand outward, moving from internal team dialogues (**Step 2**) to representative clashes (**Step 3**) and finally to full-group interaction (**Steps 4–5**). Despite this spatial widening, most players remain indirect participants, engaging through *voting* rather than active speech.

7.3.1.3 Landscape Communication Patterns

Landscape questions appear three times—each triggered by a white pulse arrow and answered with a simultaneous “yes” (Y) or “no” (N) (see **Steps 2, 3**, and **5**).

- In **Step 2**, where teams respond collectively without discussion.
- In **Step 3**, delegates repeat the same binary stance-taking on behalf of their teams.
- **Step 4** introduces a short *defense speech* (broadcast icon), providing a moment of individual persuasion but no direct dialogue.
- **Step 5** concludes with a collective vote—formal and symbolic, rather than deliberative.

Although landscape topics recur throughout play, their treatment remains transactional—fast, structured, and surface-level, leaving little space for open reasoning or shared reflection.

7.3.1.4 Facilitator's Role

The facilitator operates procedurally, guiding transitions, enforcing rules, and maintaining the game's rhythm, but remains absent from content or argumentation. Their role—largely invisible—ensures structural consistency and tempo, echoing the facilitation approach of **Clash**.

7.3.2 Indoor Parliament Variant

Fig. 7.2 Indoor Parliament: Visual analysis of the small-group communication process. Foldout diagram with legend (see pocket at the end of the volume). The legend applies to all diagrammatic detail views in Chapter 7. Graphic by the author.

Fig. 7.2 visualizes communication in **Indoor Parliament**, highlighting five key modifications in temporal logic, spatial activation, and dialogic inclusiveness compared to the **Rulebook** version.

7.3.2.1 Temporal Structure: Steps, Snapshots, and Looping Rhythm

Interaction retains five communication steps (gray boxes) and two symbolic outcomes (black **Final Steps**), but five changes—marked by black flags—differentiate **Indoor Parliament** from its predecessor:

- **Difference 1 – Extended internal loop in Step 2:** Teams can *opinion clash* several questions before selecting one, allowing pre-discussion and deeper thematic exploration. A third snapshot illustrates this added layer of reflection and denser internal rhythm.
- **Difference 2 – Expanded debate in Step 4:** The single *defense speech* becomes a multi-actor debate, visualized through multiple snapshots and branching arrows. This expands both the duration and complexity of argumentation.
- **Difference 3 – Revisable voting in Step 5:** Players may revise their stances after the debate, breaking the earlier binary rigidity. This reflective shift is shown in lettered snapshots.
- **Difference 4 – Graded scoring in the Final Step:** Symbolic point allocation becomes variable—reflecting degrees of consensus rather than a simple majority outcome.
- **Difference 5 – Adjusted looping rhythm:** If delegates reach consensus in **Step 3**, gameplay now loops back to **Step 3** rather than **Step 2**. When disagreement persists, the sequence proceeds through **Steps 4** and **5** before returning to **Step 2**. This adjustment creates smoother transitions and stabilizes gameplay flow.

Together, these modifications foster a more dialogic and flexible structure, extending the space and rhythm for argumentation and reflection.

7.3.2.2 Communication Zones and Spatial Activation

Spatial activation follows a structure similar to **Rulebook Parliament** but introduces new interaction dynamics:

- **Team zones:** Activated in Step 2, these zones provide space for internal pre-discussion before questions enter the debate phase.
- **Debate zone:** Activated in Steps 4 and 5, this area remains continuously active, supporting extended multi-actor discussion rather than brief representative exchanges.

With all questions preselected in **Step 2**, transitions become calmer and continuous. The flow now unfolds gradually—from team-level exchanges to full-group debate—rather than oscillating between intimate and public formats.

7.3.2.3 Landscape Communication Patterns

Binary yes/no responses continue to structure **Steps 2, 3, and 5**, but **Step 4** introduces a genuinely deliberative space. Following the defense monologue, multiple players add arguments and respond to one another (connected arrows), transforming stance-taking into collaborative reasoning.

Voting in **Step 5** thus becomes reflective and informed—an evaluative act grounded in prior dialogue.

7.3.2.4 Facilitator's Role

The facilitator's role expands considerably. Beyond managing transitions, they support comprehension, moderate timing, and safeguard inclusion during debate. Although remaining non-directive, their active moderation becomes essential in sustaining participatory flow and ensuring fairness in open deliberation.

7.3.3 *Street Parliament* Variant

Fig. 7.3 *Street Parliament*: Visual analysis of the small-group communication process. Foldout diagram with legend (see pocket at the end of the volume). The legend applies to all diagrammatic detail views in Chapter 7. Graphic by the author.

Fig. 7.3 visualizes *Street Parliament*, highlighting seven key adaptations (marked with black flags) in its temporal rhythm, spatial organization, and dialogic structure.

7.3.3.1 Temporal Structure: Steps, Snapshots, and Looping Rhythm

While retaining the familiar step-wise progression, *Street Parliament* introduces seven distinct differences (marked by black flags in the visualization):

- **Difference 1 – Flexible teaming in Step 1:** Only one to three teams are formed. The facilitator may even join as a player to balance participation, reflecting the fluid structure of spontaneous public settings.
- **Difference 2 – Preselection of questions in Step 2:** All questions are chosen at the start of the game, accompanied by brief pre-discussions that streamline negotiation and reduce procedural pauses.
- **Difference 3 – Removal of the delegates' forum in Step 3:** All players now deliberate directly, eliminating hierarchical representation and expanding inclusivity.
- **Difference 4 – Open, spontaneous debate in Step 4:** The *defense speech* transforms into a collective discussion. Multiple participants can contribute arguments in real time, creating a fluid and participatory exchange.
- **Difference 5 – Reflective voting in Step 5:** Even the questioning team may reconsider its stance after the *debate*. The visual index shows snapshots where alignment changes during voting, highlighting reflective judgment.
- **Difference 6 – Graded scoring in the final step:** Scoring becomes differentiated: four points for full consensus, three for majority, two for tie, and one for minority—introducing nuanced collective outcomes.
- **Difference 7 – Simplified looping rhythm:** Since all questions are pre-selected in **Step 2**, the game cycles directly back to **Step 3** instead of **Step 2**. This continuous loop eliminates unnecessary resets and maintains the flow of deliberation.

Together, these seven modifications make *Street Parliament* the most adaptive, inclusive, and dialogic of the *Urbanity* prototypes—flattening hierarchies,

encouraging immediate participation, and supporting dynamic, real-time deliberation in public contexts.

7.3.3.2 Communication Zones and Spatial Activation

Interaction unfolds across two communication zones, reflecting the spatial compression of **Street Parliament**:

- **Team zones:** Activated in **Step 2**, these zones provide space for internal team discussion within a reduced overall play area.
- **Collective debate zone:** Activated in **Steps 3–5**, this unified space replaces the delegates' forum and accommodates all participants simultaneously.

This configuration creates an open, group-wide dialogue space, suited to the spontaneity of public play.

7.3.3.3 Landscape Communication Patterns

Landscape dialogue becomes fluid and continuous rather than formally segmented:

- **Step 2:** Reflection occurs during pre-discussions before stance-taking.
- **Step 3:** All participants express their positions directly, eliminating representation.
- **Step 4:** Multi-voiced debate allows ideas to circulate collectively.
- In **Step 5:** Players, including the questioning team, can re-evaluate and vote reflectively.

While binary stance-taking remains a structural constant, **Step 4** opens a deliberative phase—broadening expressive diversity and inclusivity.

7.3.3.4 Facilitator's Role

In open, unpredictable environments, the facilitator performs a hybrid role—balancing organizational and participatory functions. They may step in as a player to maintain team balance while ensuring clarity, timing, and procedural coherence. This flexible duality—both guide and participant—helps sustain momentum, foster inclusivity, and anchor reflection amid the fluid dynamics of street settings.

7.4 Thematic Analysis of Factors and Facilitation Tasks of the Game Design Archive

This section identifies the factors and facilitation tasks influencing small-group communication in **Parliament**. The analysis builds on thematic coding of email correspondence, field observations, facilitator notes, and media documentation, following the analytical framework introduced in Section 4.4.2.2.

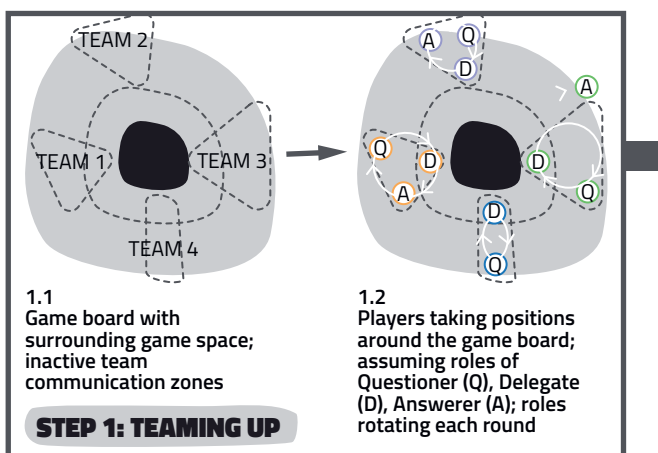
It examines each communication step represented in the visual analyses in Section 7.3) and in the corresponding foldout diagrams (Figs. 7.1–7.3) across the three variants: **Rulebook Parliament**, **Indoor Parliament**, and **Street Parliament**. The analysis highlights how design choices, player behavior, and environmental conditions shaped dialogue and decision-making...

Step-level findings (Sections 7.4.1–7.4.6) are followed by factors acting across the entire game (Section 7.4.7) and by the most significant facilitation practices (Section 7.4.8).

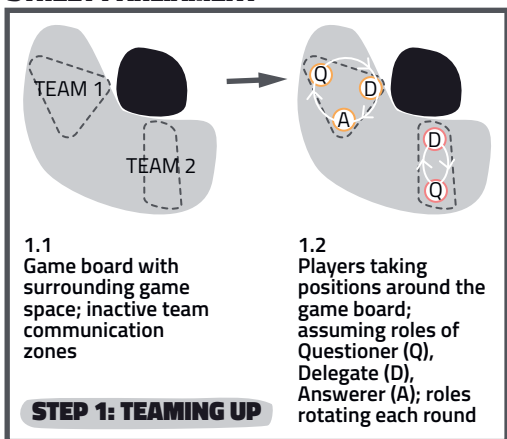
Findings from this section contribute to the *Game Design Catalogue* and *Facilitation Guide* (Chapter 10).

7.4.1 Step 1: Teaming Up

RULEBOOK AND INDOOR PARLIAMENT



STREET PARLIAMENT



DIFFERENCE 1 – FLEXIBLE TEAMING

Fig. 7.4 Parliament: Step 1: Teaming Up. Comparative detail from the foldout diagrams shown in Figs. 7.1–7.3 (see legend in foldout figures in the pocket at the end of the volume). Graphic by the author.

In **Step 1: Teaming Up** (Fig. 7.4), participants form teams and select their roles, preparing for the verbal interaction that follows. This step defines the basic social and spatial structure of **Parliament**, introducing how players will collaborate and represent one another in later stages.

Snapshot 1.1 shows players gathering around the central board and dividing into small teams.

Snapshot 1.2 captures the role-assignment process: within each team, members decide who will act as questioner, responder, and delegate, establishing the communicative hierarchy that will guide the following steps.

These initial arrangements set the tone for subsequent interaction.

- In **Rulebook** and **Indoor Parliament**, larger groups (around 18 players) were divided into teams of 2–3 members, forming two to six groups that could operate in parallel.
- In **Street Parliament**, the smaller, more flexible setting often produced only a single group or two loose teams, with facilitators occasionally joining to balance numbers.

7.4.1.1 Group Division

Definition: Group division is the structural arrangement of participants into one or more interaction units—fixed, random, or player-chosen—that shapes who interacts with whom, how often, and in what capacity. This design element guides the intensity, sequence, and equity of small-group communication. ↔ See Sections 6.4.1.1, 7.4.1.1, 8.4.3.4, 9.4.1.2, and 10.1.1.8.

In **Rulebook** and **Indoor Parliament**, larger cohorts (around 18 players) were split into teams of 2–3 members, forming two to six groups that could interact in parallel. In **Street Parliament**, the smaller, more flexible setting often produced only a single group or two loose teams, with facilitators occasionally joining to balance numbers.

Group division then shifted as play progressed:

- **Step 3: Opinion Clash in Delegates' Forum & For All** introduced structural divergence.
 - **Rulebook** and **Indoor Parliament:** Team-based division became hierarchical. Only delegates (defined in **Step 1**) entered the forum and spoke, while non-delegates observed—resulting in two sub-groups (→ see **Communicative Roles, Partner Selection**).
 - **Street Parliament:** Teams dissolved, and all players continued together as a single group.
 - **Step 4: Defense Speech & Free Debate** further reshaped dynamics.
 - **Rulebook Parliament:** One delegate spoke while others listened, again dividing the session into two sub-groups.
 - **Indoor** and **Street Parliament:** All players formed a single group with fluid speaking rights.
- **Step 5: Voting** unified all players into a single group across every version.

This progression shows how group division structured the communication flow—determining when dialogue unfolded in smaller clusters and when it expanded to include everyone.

7.4.1.2 Communicative Roles

Definition: Communicative roles are the functional positions players assume during interaction—such as speaker, addressee, or observer—that guide how dialogue flows within small groups. These roles influence who contributes, who listens, and who reflects, shaping participation dynamics. ↔ See Sections 6.4.3.5, 7.4.1.2, 8.4.4.3 and 10.1.1.5.

At the outset, in **Step 1: Teaming Up**, players were assigned specific roles that structured interaction, each aligned with a communicative function (Fig. 7.4):

- **Questioner:** Reads the question aloud and initiates discussion (speaker; **Snapshot 2.1–2.2**).
- **Responder:** Listens first (addressee; **Snapshot 2.1**), then expresses a view after the countdown (speaker; **Snapshot 2.2**).
- **Delegate:** Listens first (addressee; **Snapshot 2.1**), then expresses a view after the countdown (speaker; **Snapshot 2.2**). The delegate represents the team's final position in **Step 3**.

Although the design intended these roles to rotate, in practice most teams retained their initial configuration throughout play (M9_20150308).⁶

Communicative roles evolved across the game:

- **Step 3: Opinion Clash in Delegates' Forum & For All:** Only delegates became active speakers and addressees, while all others shifted into observer roles.
- **Step 4: Defense Speech & Free Debate:** In **Rulebook Parliament**, the defending delegate acted as speaker while others listened as addressees. In **Indoor** and **Street Parliament**, however, the format expanded into a free debate—any participant could speak or listen at will, and the observer role effectively disappeared.
- **Step 5: Voting:** The facilitator typically read the question aloud (speaker) to all players (addressees), after which every participant responded simultaneously through gesture (hand raise or squat), momentarily turning all into collective speakers.

This sequence shows how predefined game roles determined communicative roles, which then shifted progressively—from fixed and hierarchical to open, fluid, and finally collective.

7.4.1.3 Player Proximity

Definition: Player proximity refers to the physical distance between players, shaping the immediacy, intimacy, and mode of their interactions. Proximity influences the use of verbal, non-verbal, and embodied cues, thereby affecting focus, connection, and overall group cohesion. ↔ See Sections 6.4.1.3, 7.4.1.3, and 10.1.2.4.

Player proximity played a key role in sustaining small-group communication, particularly in noisy or open environments. In **Rulebook** and **Indoor Parliament**,

teams were evenly spaced around the game board—an arrangement that worked well indoors, where controlled acoustics supported both concentration and clarity.

In **Street Parliament**, however, the same spacing left players too far apart to hear one another (→ see **Player Audibility**). As one facilitator observed, “The location influenced the course of the game, as the noise level and spatial concept were not aligned.”²⁹ (T8_20150517). Over-the-board dialogue frequently broke down. To adapt, players were repositioned to one side of the board, reducing distance within and between teams. This closer formation improved audibility and coordination—crucial adjustments for dialogue to function in public space.

7.4.1.4 NEW! Physical Characteristics

Definition: Physical characteristics refer to players’ bodily attributes—such as mobility, height, or appearance—that influence spatial positioning, visibility, and communicative confidence. These physical differences shape who feels empowered to speak, who is noticed, and how participation unfolds within the group. ↔ See Sections 7.4.1.4 and 10.1.3.7.

Physical characteristics influenced both the spatial setup in **Step 1** and the communication dynamics in **Step 4** of **Street Parliament**.

- In **Step 1**, *mobility* was decisive. The presence of wheelchair users challenged the default circular layout: “with the wheelchair, it was no longer possible to form the circle around the play area, nor to create the inner and outer rings”³⁰ (T8_20150517). Facilitators promptly adapted the configuration to ensure accessibility and equal participation. This demonstrated how physical characteristics directly shape not only how space is organized, but whether inclusive dialogue is possible from the start.
- In **Step 4: Defense Speech & Free Debate**, *height* emerged as another factor. While initially unnoticed, differences in height gradually influenced confidence and engagement. Taller players tended to appear more authoritative, while shorter participants sometimes hesitated or showed discomfort: they “they behaved awkwardly and, given their position, I think they felt looked down upon”³¹ (T8_20150517). To counter this, facilitators adjusted their own positioning—moving closer, squatting, or standing beside shorter players—to restore a sense of inclusion: “I felt awkward myself and tried to move closer to the players; I crouched down so they would feel safe”³² (T8_20150517).

These observations underline how subtle physical differences, if unaddressed,

29 „A helyszín befolyásolta a menetet, a hangzavar és térbeli koncepció nem stimmelt.”

30 „kerekszékekkel már nem volt megvalósítható a játéktér körbe állása, illetve a küldő-belső kör kialakítása.”

31 „zavartan viselkedtek és a pozícióból adódóan szerintem lekezelve érezték magukat”

32 „zavartan éreztem magam és próbáltam közelebb húzódni a játékosokhoz, leguggoltam, hogy biztonságban érezzék magukat”

can shape both the structure and the emotional tone of communication—making physical inclusivity a precondition for open dialogue.

7.4.1.5 NEW! Group Size

Definition: Group size refers to the total number of players participating in a session, shaping how easily participants can engage, contribute, and sustain small-group communication. It affects interaction flow, participation equity, and pacing. ↔ See Sections 7.4.1.5, 9.4.1.1, and 10.1.1.7.

Rulebook and **Indoor Parliament**, sessions of 7–15 players supported balanced participation through effective group division and the calm, controlled atmosphere of indoor settings (→ see **Group Division, Space Quality**).

In contrast, **Street Parliament** groups ranged from one to roughly thirty players. Larger gatherings often led to passivity, shifting many participants into observer roles (→ see **Communicative Roles**) (T10_20150524), while smaller groups encouraged more active dialogue—though facilitators sometimes joined to maintain group structure (T10_20150524; T11_20150531).

These variations show how group size directly influenced participation: as numbers grew, communication became less balanced and required stronger facilitation; when fewer players were present, exchanges were livelier but more fragile, depending on facilitator involvement to sustain flow.

7.4.1.6 NEW! Game Context

Definition: Game context refers to the broader spatial, temporal, and social conditions in which gameplay occurs. It includes location (e.g., indoor/outdoor, public/private), timing (e.g., time of day, duration), and situational factors (e.g., background noise, social energy)—all of which influence communication dynamics. ↔ See Section 7.4.1.6 and 10.1.2.1.

Location and timing critically shaped interaction, especially in **Street Parliament**. Well-positioned setups in lively urban areas often attracted attention: “We placed the [game] board on the street corner so that people could still pass by, but we would remain visible both from the road and from the square.”³³ (T7_20150517). In contrast, poor timing or overlooked locations reduced engagement: “couldn’t recruit any players, maybe we started too early.”³⁴ (T6_20150517), or “Even the people waiting couldn’t be convinced to join, though they had been waiting for at least fifteen minutes. The [park] visitors chatting nearby refused to play, saying they hadn’t seen each other in a long time [...]”³⁵ (T6_20150517).

Social context also proved decisive: “[...] the homeless people watched [the game] but didn’t want to join. The young people, hungover, only wanted to hang

33 „Az utcasarokra helyeztük el a [játék] táblát úgy, hogy még tudjanak mellettünk közlekedni, de az útról és a térről is láthatóak legyünk.”

34 „nem sikerült játékosokat verbuválni, talán túl korán kezdtük.”

35 „A várakozó embereket sem lehetett befűzni, pedig legalább negyedórát vártak. A [parkban] beszélgető felek elutasították a játékot, mert rég találkoztak [...]”

out [not to play].”³⁶ (T6_20150517). Festival zones and tourist-heavy moments worked particularly well: “We should find a location that’s not so crowded with tourists, because in these street situations, they’re often the only ones open to playing—they have time and are specifically looking for free entertainment. The local residents are usually just passing through the street and won’t stop to play. For them, time might be the critical factor.”³⁷ (T7_20150517). Even passersby sometimes contributed indirectly: “an older man came by at the beginning and asked about the game. He liked the concept but couldn’t join because he had a stall in the square. Still, he immediately mentioned that there would be a [...] group we might want to play with”³⁸ (T8_20150517). Pre-scheduled sessions, such as school group bookings, ensured participation but limited spontaneous public involvement as they were “not likely to attract any spontaneous new players.”³⁹ (E_20150518c).

Together, these observations show that game context—where, when, and with whom gameplay unfolds—strongly conditions communication patterns, accessibility, and the intensity of communication.

7.4.1.7 NEW! Ambient Conditions

Definition: Ambient conditions refer to the physical characteristics of the environment—such as noise, weather, seating, and spatial arrangement—that influence how players focus, interact, and sustain small-group communication. ↔ See Sections 7.4.1.7, 9.4.1.3, and 10.1.2.2.

Unlike the quiet, controlled environments of *Rulebook* and *Indoor Parliament*, *Street Parliament* operated in unpredictable public contexts. This exposed gameplay to both disruption and opportunity.

Noise, weather, and visual distractions often made it difficult to sustain meaningful dialogue: “A sunny, busy spot that immediately provided players. Because of the festival in the square, there were many people around, specifically looking for activities. However, the noise was unfavorable for the game—especially when the stage sound check started!”⁴⁰ (T8_20150517).

36 „[...] a hajléktalan emberek elnézték [a játékot], de játszani már nem szerettek volna. A fiatalok másnaposan csak bandázni akartak [játszani nem].”

37 „Olyan helyszínt kellene találni, ami nem annyira zsúfolt turistákkal, mert ezekben az utcai szituációkban sokszor csak ők azok, akik fogékonyak a játékra, mert ők ráérnek és pont az ingyenes szórakoztató programokat keresik. A helyi lakosok átutazóban vannak az utcán és nem állnak meg csak úgy játszani! Náluk az idő tényező fontos lehet!”

38 „egy bácsi már az elején jött és érdeklődött a játékról, tetszett neki a koncepció, de éppen standja volt a téren, ezért nem volt alkalma beállni, viszont egyből mondta, hogy lesz egy [...] csoport, akikkel érdemes lenne játszani”

39 „nem valószínű, hogy bevonoz majd spontán, új játékost”

40 „Napos, forgalmas hely, ami egyből biztosította a játékosokat. A téren lévő fesztivál miatt sokan voltak itt, kifejezetten az eseményeket keresve. Viszont a hangzavar nem kedvezett a játéknak, különösen az nem, amikor a színpadihangolás elkezdődött!”

Other *environmental factors*—such as wind, heat, or unpredictable crowds—required constant facilitator adaptation (T6_20150517; T8_20150517). Yet these very frictions also heightened the sense of realism. Gameplay felt embedded in the actual rhythms of urban life: “On our first action day, we experienced how much the urban terrain can add to each gameplay! The questions *de facto* appear in the streets and public spaces, which can even support instant decision-making.”⁴¹ (kultúrAktív Egyesület, 2015, August 28).

Sometimes this *immediacy* even became participatory. A sanitation worker interrupted to explain that bikes locked to bins “obstruct their work, as they can’t lift and empty the bin!”⁴² (T7_20150517).

These ambient conditions shaped not only communication clarity but also the emotional tone of debate—making discussions alternately more spontaneous, more combative, or more fragmented, depending on the moment.

7.4.2 Step 2: Opinion Clash in Teams

In **Step 2: Opinion Clash in Teams** (Fig. 7.5), the first structured verbal interaction unfolds within the newly formed team units. Each team addresses a selected landscape issue, marking the start of explicit stance-taking in **Parliament**.

Snapshot 2.1 shows the initiation of communication: the questioner reads aloud a yes-or-no question, activating the team’s communication zone (white pulse).

Snapshot 2.2 depicts teammates responding simultaneously by choosing “yes” or “no” (Y/N markers), lighting up their respective team zones.

Snapshot 2.3 illustrates how, in **Indoor** and **Street Parliament**, teams extended these exchanges into short discussions before the *opinion clash*. This additional step transformed **Step 1** into active engagement, as players began to articulate, defend, and question viewpoints.

In practice, this often led to a slower rhythm in **Indoor** and **Street Parliament**: “The players discussed the topic briefly among themselves, making use of the momentum of the chosen issue—a positive sign, as it initiated conversation”⁴³ (T1_20150314); and “In my view, the defense speech/justification should already be included in the small-group round. During the game, we often paused to discuss our views within the team, which was fortunately made possible by the relaxed tempo.”⁴⁴ (E_20150518c).

41 „Első akciónapunkon megtapasztalhattuk, hogy a városi terep rendkívül sokat tehet hozzá egy-egy játékmenethez! A kérdések *de facto* megjelennek az utcán és a köztereken, ami segítségünkre lehet az azonnali döntéshozatalban is.”

42 „akadályozzák az ő munkájukat, ugyanis nem tudják leemelni és kiüríteni a szemetest!”

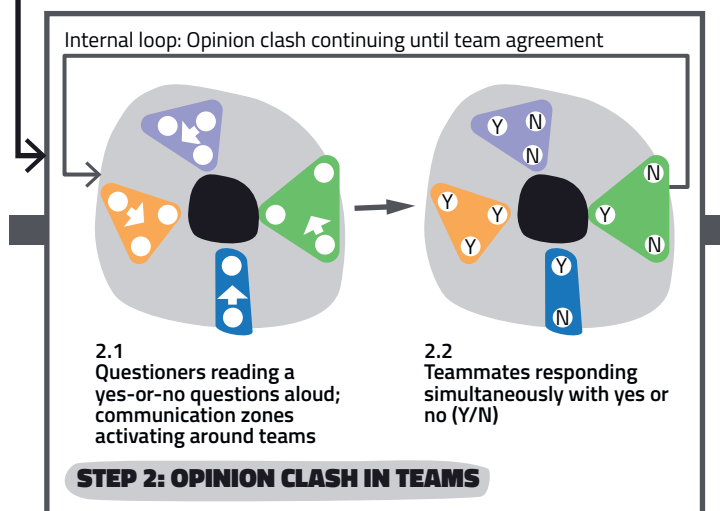
43 „A témát pár szóban maguk között is megbeszélték a játékosok kihasználva a hevét a kiválasztott témának, mert ez pozitív, hogy beszélgetés indul”

44 „A védőbeszédet/indoklást szerintem a játékszabályban már a kiscsoportos körben is érdemes bevezetni. Játék közben többször előfordult, hogy megálltunk megvitatni csapaton belül a nézeteket, és ezt szerencsére a laza tempó engedte.”

RULEBOOK PARLIAMENT

Loop 2: Returning to Step 2 after Final Step B and C

Loop 1: Returning to Step 2 after Final Step A



STREET PARLIAMENT

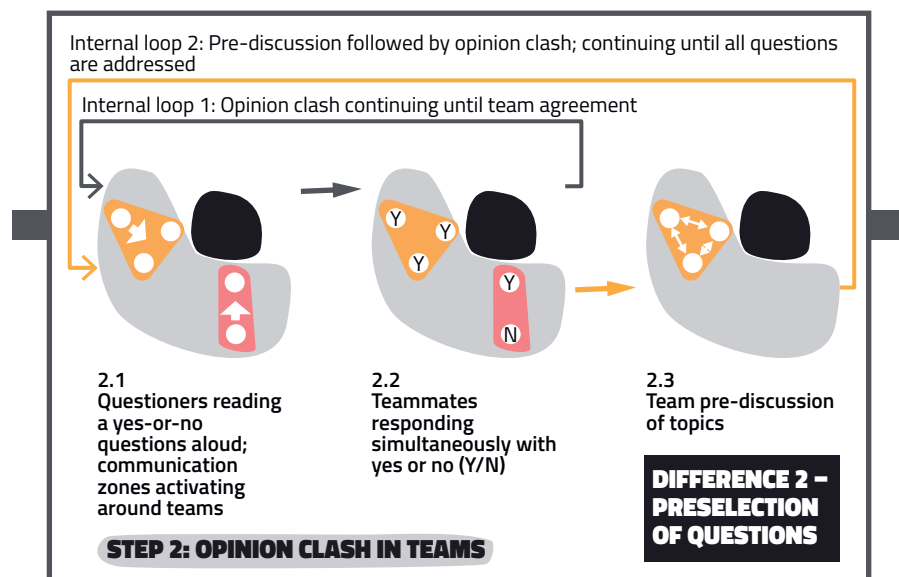
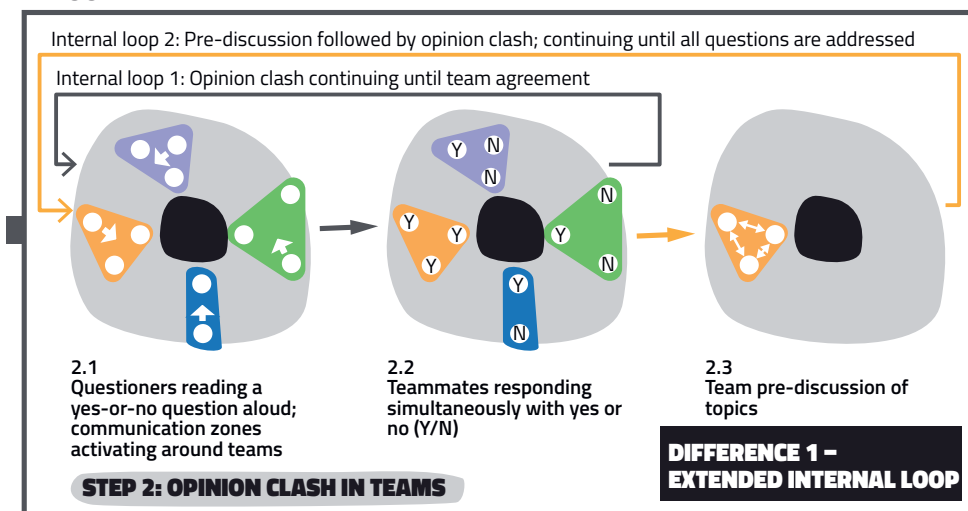


Fig. 7.5 Parliament: Step 2: Opinion Clash in Teams. Comparative detail from the foldout diagrams shown in Figs. 7.1–7.3. Graphic by the author.

These spontaneous pre-discussions redefined the designed structure: rather than proceeding question by question, many groups debated all topics in advance before formal voting began. As one report noted, “The rules—or the schedule—got a bit mixed up. Already at the first question, they started discussing the issues, and by the time everyone received their questions, the first cards

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had already been talked through. So instead, in the first round they went through everything in small teams, and afterwards we voted and talked in the inner circle.”⁴⁵ (T11_20150531).

Such adaptations reveal how participants stretched a rule-bound rhythm into a conversational one—turning the game’s second step into a space for negotiation and shared reasoning.

7.4.2.1 Partner Selection

Definition: Partner selection is the method by which players are grouped for interaction—whether chosen by participants, assigned by rules, or randomized. This mechanism determines whose perspectives are exchanged and how interaction patterns emerge. ↔ See Sections 6.4.2.2, 7.4.2.1, 8.4.3.3, and 10.1.1.10.

In **Step 2: Opinion Clash in Teams**, partner selection was entirely game-assigned. Roles and teams had been set during **Step 1: Teaming Up**, defining who interacted with whom. The questioner posed a yes-or-no question to their teammates (responders), creating a clear but fixed interaction pattern. This ensured clarity and balanced turn-taking but left little room for spontaneity or player agency at this stage.

Later steps introduced a mix of game-assigned and player-driven selection methods:

- **Step 3: Opinion Clash in Delegates’ Forum & For All:** Only players assigned as delegates in Step 1 were eligible to speak, maintaining a game-assigned structure.

45 „Kicsit borult a szabály, azaz a menterend – már az első kérdésnél megvitatták a dolgokat, mire mindenki megkapta a kérdéseket, az első kártyákat már megbeszélték, ezért inkább első körben mindent sorra vettek kis csapatban, utána szavaztunk és beszélgettünk belső körben.”

- **Step 4: Defense Speech & Free Debate:** Methods diverged across prototypes.
 - **Rulebook Parliament:** The defending speaker was predetermined—the delegate who initiated the question delivered the *defense speech* (game-assigned).
 - **Indoor** and **Street Parliament:** Player-driven participation emerged; anyone could volunteer to give the *defense speech* or join the open debate.
- **Step 5: Voting:** Selection returned to a game-assigned format across all versions, ensuring that every player participated in the final decision.

Across these steps, partner selection alternated between pre-defined representation to self-chosen dialogue, showing how small shifts in control could reconfigure communication.

7.4.3 Step 3: Opinion Clash in Delegates' Forum & For All

In **Step 3: Opinion Clash in Delegates' Forum & For All** (Fig. 7.6), interaction shifts from enclosed team discussions to a public display of team positions through simultaneous stance-taking.

Snapshot 3.1 shows the initiation of the *opinion clash*: in **Rulebook** and **Indoor Parliament**, each team's delegate moves into an inner circle around the board, turning their back to their teammates. The questioning delegate reads the selected issue aloud, sending a white pulse that activates the orange communication zone. In **Street Parliament**, no delegates are chosen; the smaller number of players allows all participants to take part directly in the exchange. **Snapshot 3.2** captures the simultaneous stance-taking: all delegates respond at the count of three with a “yes” or “no” gesture (hand raise or squat).

- **Snapshot 3.2-A** depicts agreement: all active participants give the same response (“yes” or “no”), leading directly to construction in the **Final Step: Constructing with Consensus**.
- **Snapshot 3.2-B** depicts disagreement: delegates—or, in **Street Parliament**, all players—give differing answers. This outcome triggers **Step 4: Defense Speech & Free Debate**, where reasoning and persuasion first enter the process.

7.4.3.1 Space Layout

Definition: Space layout refers to the spatial organization of the play area, including the arrangement of players and game elements. The configuration of space shapes how participants move, who they can see and hear, and what forms of interaction are made possible—or restricted. ↔ See Sections 6.4.1.2, 7.4.3.1, 8.4.1.2, and 10.1.2.3.

The space layout strongly influenced participation and engagement dynamics during **Step 3: Opinion Clash in Delegates' Forum & For All**.

RULEBOOK PARLIAMENT

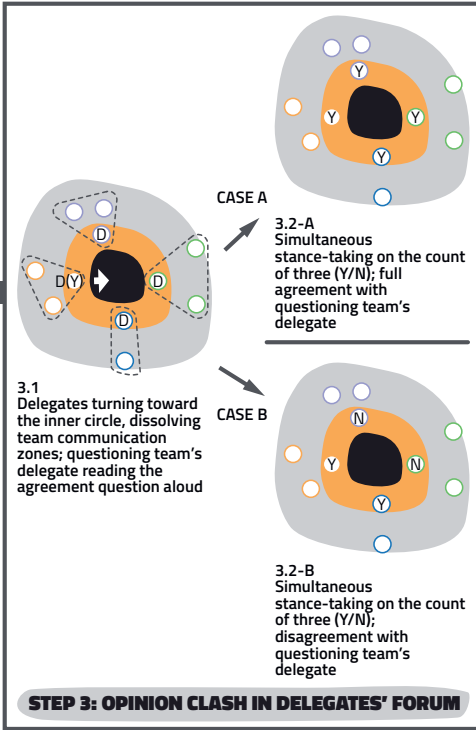


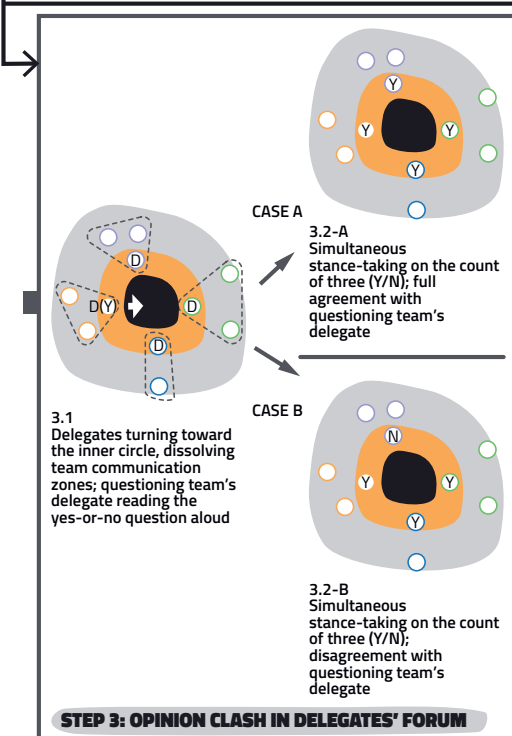
Fig. 7.6 Parliament. Step 3: Opinion Clash in Delegates' Forum & For All. Comparative detail from the foldout diagrams shown in Figs. 7.1–7.3. Graphic by the author.

INDOOR PARLIAMENT

DIFFERENCE 5 – ADJUSTED LOOPING RHYTHM

Loop 2: Returning to Step 3 after Final Step B and C

Loop 1: Returning to Step 3 after Final Step A

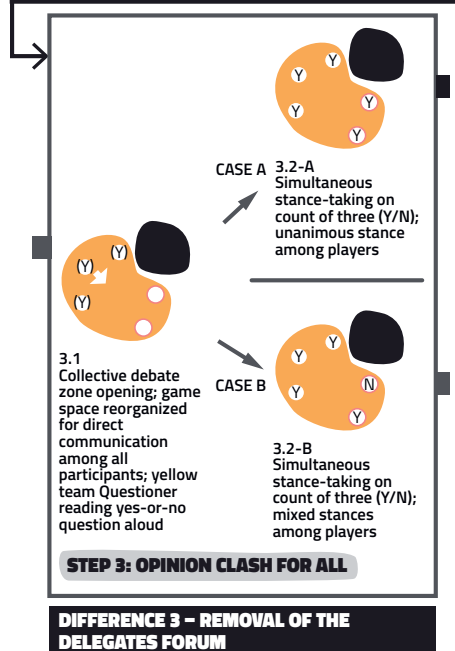


INDOOR PARLIAMENT

DIFFERENCE 7 – SIMPLIFIED LOOPING RHYTHM

Loop 2: Returning to Step 3 after Final Step B, C and D

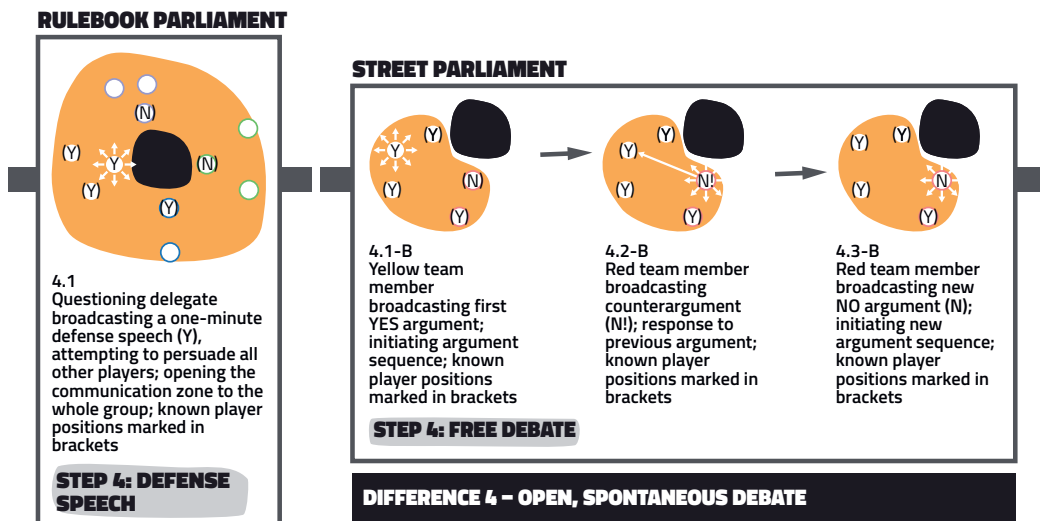
Loop 1: Returning to Step 3 after Final Step A



- In *Rulebook* and *Indoor Parliament*, delegates formed a compact inner circle around the central city board, facing each other while teammates stood behind them as passive observers (→ see **Player Visibility**). This *fishbowl configuration* emphasized representation and hierarchy: only the delegates were visible and audible, while others had limited access to the ongoing exchange. When replicated in *Street Parliament*, this setup reduced both audibility and presence (→ see **Player Audibility, Communicative Roles**), leading to disengagement among bystanders (T10_20150524).
- In *Street Parliament*, most setups instead adopted a single large circle, with all players facing each other directly. This open formation improved hearing, proximity, and collective awareness (→ see **Player Proximity, Player Audibility, Player Visibility, Communication Roles**). One facilitator noted: “While reading out the questions in the inner circle, I made sure that a larger circle formed around the game so that everyone could be part of it. I also guided them closer together so they could hear each other better.”⁴⁶ (T11_20150531).

This spatial reconfiguration remained in place through **Step 4: Defense Speech & Free Debate** and **Step 5: Voting**. While *Rulebook* and *Indoor* maintained a spatial hierarchy that fostered passivity, *Street Parliament*’s circular format supported continuous, collective engagement until the end of play.

7.4.4 Step 4: Defense Speech & Free Debate



46 „A belső körben a kérdések felolvasásakor figyeltem arra, hogy a játék körül egy nagy kör alakuljon ki, hogy mindenki részese lehessen a játéknak és tereltem őket egymáshoz közelebb, hogy jobban hallják egymást.”

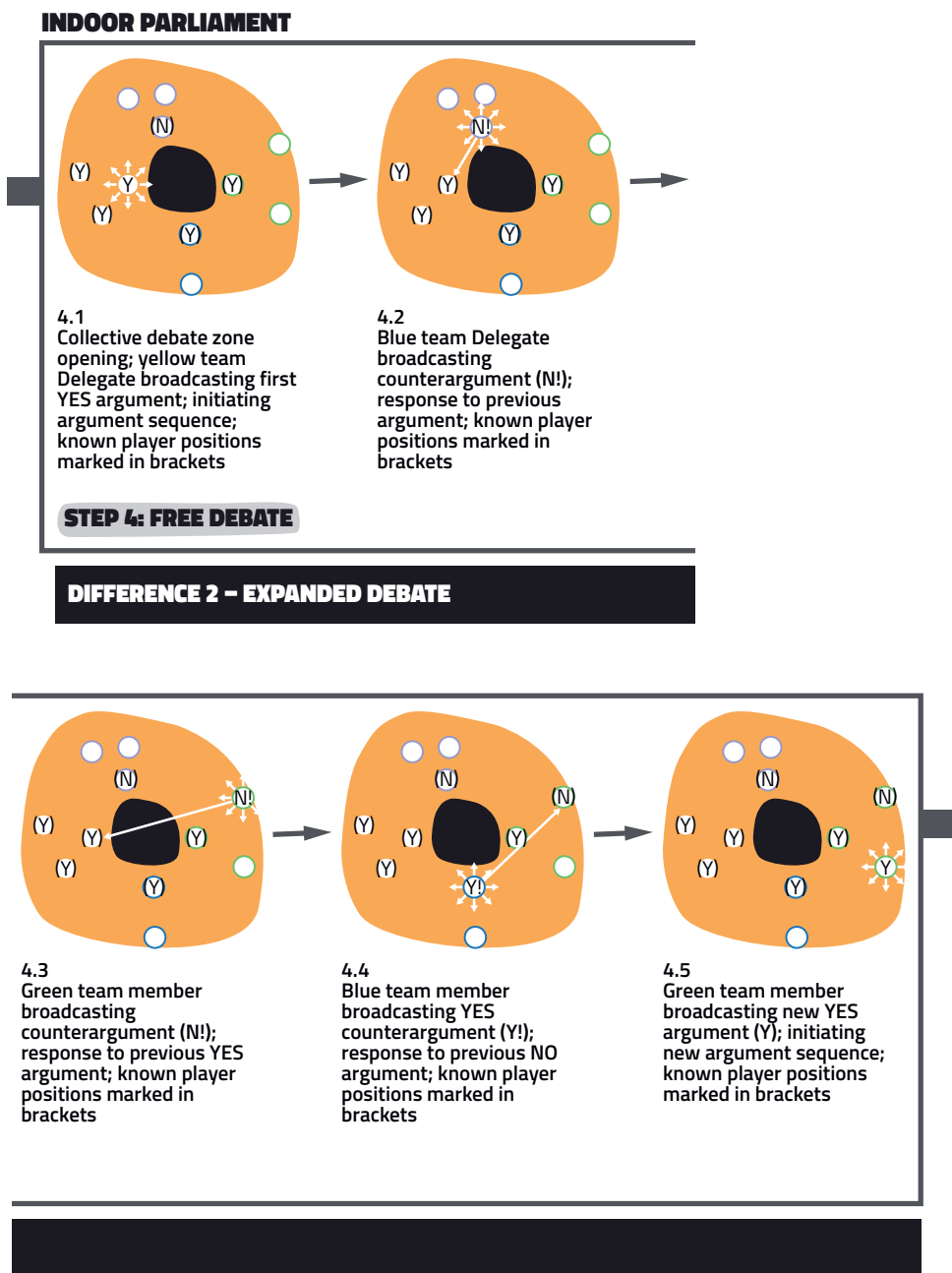


Fig. 7.7 Parliament: Step 4: Defense Speech & Free Debate. Comparative detail from the foldout diagrams shown in Figs. 7.1–7.3. Graphic by the author.

In **Step 4: Defense Speech & Free Debate** (Fig. 7.7), interaction moves from simultaneous stance-taking to expression of opinions and open verbal exchange. Players begin to justify, question, and react to one another's opinions, transforming the brief *opinion clash* of **Step 3** into a multi-voiced discussion: "[...] our goal became to create a dialogue among players that would provide an opportunity

for expressing individual opinions, while the exchange of arguments and counterarguments would activate and encourage them to take part in shaping their own living environment.”⁴⁷ (kultúrAktív Egyesület, 2015, August 28).

- **Rulebook Parliament:** A one-minute *defense speech* by the questioning delegate aims to persuade others (marked with a broadcast icon and the letter Y in [Snapshot 4.1](#)). The rest listen attentively.
- **Indoor Parliament:** Sequential exchanges unfold. The yellow team begins with the *defense speech* ([Snapshot 4.1](#)); the purple team counters (N!, [Snapshot 4.2](#)); the green team reinforces (N!, [Snapshot 4.3](#)); the blue team rebuts (Y!, [Snapshot 4.4](#)); and the green team adds a new argument (Y, [Snapshot 4.5](#)). Arrows in the figure trace this turn-based dialogue. Facilitators observed that: “you just have to ask, and the different urban actors are happy to share their opinions with each other through the game.”⁴⁸ (kultúrAktív Egyesület, 2015, August 28).
- **Street Parliament:** Dialogue becomes fluid and improvisational—any player may speak or respond at any moment. The yellow player voices support (Y, [Snapshot 4.1](#)); a red player offers a contradiction (N!, [Snapshot 4.2](#)) and a counterpoint (N, [Snapshot 4.3](#)). This unstructured format matched the spontaneous and open nature of the street setting.

Evaluation sessions confirmed that [Step 4](#) carried the strongest civic potential: it enabled reasoning, disagreement, and the testing of arguments (M13_20150806; Járókelők, 2015, August 3; Tilos Rádió 90.3, 2015, August 8). Unlike in **Clash**, where exchanges were short and binary, **Parliament** sustained dialogue long enough for players to construct shared understanding.

7.4.4.1 NEW! Communication Rules

Definition: Communication rules shape how, when, and by whom interaction happens during gameplay. These rules vary in strictness—from tightly regulated turns and formats to open, spontaneous exchanges—and influence who speaks, how long, in what order, and through which modes (verbal, non-verbal, or symbolic). ↔ See Sections 7.4.4.1 and 8.4.4.2, and 10.1.1.3.

The three **Parliament** prototypes employed distinct communication rules that influenced the nature of small-group dialogue—shifting gameplay from quick responses to extended exchanges involving reasoning, persuasion, and contestation.

- **Rulebook Parliament:** Communication was tightly regulated. Only the questioning delegate could speak, delivering a one-minute *defense*

⁴⁷ „[...] célunk az lett, hogy a játékosok között kialakuló párbeszéd teremtsen lehetőséget az egyéni vélemények kinyilvánítására, az érvek és ellenérvek megismerése aktivizálja és ösztönözze a játékosokat, hogy ők is részt vegyenek életterük alakításában.”

⁴⁸ „csak kérdezni kell, és a különböző városi szereplők szívesen osszák meg véleményüket egymással a játékban.”

speech. All others remained silent. This structure ensured clarity and pace but limited opportunities for spontaneous argument or collaborative reasoning.

- **Indoor Parliament:** While still turn-based, players were allowed—and often eager—to interrupt, respond, or build on each other's points. The *defense speech* frequently sparked a chain of reactive statements, creating a dynamic yet still ordered exchange (T1_20150314).
- **Street Parliament:** Turn-taking was dropped altogether (T7_20150517; T11_20150531). Any player could speak at any moment, jumping in to challenge, support, or redirect the discussion. Spontaneous reactions emerged, with players “kept asking for clarification”⁴⁹ (T7_20150517). Although this free form required stronger facilitation—“The discussion in the inner circle often devolved into arguments, which somewhat slowed down the pace of the game”⁵⁰ (T11_20150531)—it also generated dynamic, inclusive dialogue.

These variations show how communication rules shaped the quality and style of group dialogue—from structured persuasion to open, improvisational debate. When aligned with the context and goals of a session, they supported different forms of civic learning: clarity, collaboration, or deliberation.

7.4.4.2 Player Audibility

Definition: Player audibility refers to the clarity with which players can hear and understand one another. Audibility influences attention, participation, emotional tone, and the potential for shared understanding. ↔ See Sections 6.4.1.4, 7.4.4.2, and 10.1.2.6.

Unlike the controlled indoor settings of *Rulebook* and *Indoor Parliament*, the open-air format of *Street Parliament* introduced significant acoustic interference (→ see **Ambient Conditions**). Noise from traffic and the openness of the space hindered communication. Facilitators attempted to mitigate this by clustering players closer together (→ see **Player Proximity**), but voices still often had to be raised: “the noise level was so high that communication amounted to shouting”⁵¹ (T8_20150517).

This shift in volume affected the tone of interaction: “Due to the heavy foot traffic, the game never developed an intimate or safe atmosphere that the family would have needed; instead, a confrontational and defensive mood emerged, from which they were glad to withdraw.”⁵² (T8_20150517).

Player audibility thus emerged not only as a technical constraint, but as a factor shaping both the emotional atmosphere and the communicative dynamics of the game.

49 „többször visszakérdeztünk”

50 „A belső kör megbeszélése általában érvelésbe fulladt, így kicsit lassabb volt a játék tempója”

51 „a zajszint annyira magas volt, hogy a kommunikáció inkább ordítás volt”

52 „A nagy forgalom miatt nem alakult ki intim és biztonságos játék, amit a család igényelt volna, és így inkább egy vitázó-védekező hangulat alakult ki, amiből szívesen távoztak”

7.4.4.3 Landscape Pulse (Communication Topic)

Definition: Landscape pulses—also referred to as communication topics—are short prompts (e.g., questions, statements, or scenarios) that introduce a theme for discussion and shape small-group interaction toward dialogue, problem-solving, or decision-making. ↔ See Sections 6.4.3.1, 7.4.4.3, 8.4.4.1, 9.4.3.1.1, 9.4.3.2.4, and 10.1.1.2.

Observations in *Street Parliament* showed that two characteristics of the questions—presentation and familiarity—strongly influenced how debates unfolded and what kinds of reflection they triggered:

Presentation (how simply or abstractly the pulse is formulated): Fact-based prompts (e.g., *Did you know...?*) failed to spark discussion—participants found little room for personal reflection (T6_20150517; E_20150518c).

Familiarity (how well players recognize or relate to the topic from experience): Simple, relatable questions (e.g., *Are there enough trash bins on the streets?*) prompted deeper and more varied dialogue. They opened up broader reflections on urban life (E_20150518c). As one reflection noted: “[...] even the simplest questions—like ‘Are there enough trash bins on the streets?’—raise a host of broader issues concerning societal arrangements. What kind of urban environment do we live in? Who is responsible for picking up trash? What kind of waste do we place in the bin? Is spitting sunflower seeds on the ground considered littering? Would you place trash bins differently in a street than in a park? What about downtown versus the suburbs? Selective or mixed waste?”⁵³ (kultúrAktív Egyesület, 2015, August 28).

Thus, landscape pulses that were both open-ended and familiar improved accessibility and engagement—ensuring that all players, regardless of background, could participate meaningfully.

7.4.4.4 NEW! Symbolism in Gameplay

Definition: Symbolism in gameplay refers to the implicit messages embedded in a game’s terminology, mechanics, and visual cues. These symbolic elements shape how players interpret rules, roles, and outcomes—guiding communication toward competition, cooperation, or deliberation. ↔ See Sections 7.4.4.4, 7.4.5.1, 8.4.7.2, 9.4.2.4, 9.4.5.2, and 10.1.2.9.

Symbolism framed discussion differently across the *Parliament* prototypes:

- *Rulebook* and *Indoor Parliament*: the term *defense speech* cast **Step 4** as a persuasive act rather than an exploratory one, encouraging strategically competitive discourse: “People have very different opinions. And then

53 “[...] a legegyszerűbb kérdés is – pl. elég szemetes van-e az utcákon? – rengeteg társadalmi berendezkedéssel kapcsolatos egyéb kérdést vet fel. Milyen városi környezetben élünk? Kinek a feladata a szemétszedés? Milyen szemetet helyezünk el a szemetesben? Szemetelés-e a szotyizás? Máshogy helyezed el a szemeteseket az utcán, mint a parkban? Belváros-külváros? Szelektív vagy ömlesztett?”

they try to convince each other. So the game is actually surprisingly effective. High school students usually show up bored and passive, but within ten minutes they start trying to persuade one another.”⁵⁴ (Tilos Rádió 90.3, 2015, August 8). The scoring system reinforced this framing by rewarding teams that successfully persuaded others—emphasizing agreement over open-ended exploration (→ see **Scoring System**).

- **Street Parliament:** Relaxed communication rules softened this persuasive framing, while the enjoyment of exploring differing viewpoints shifted interactions toward more open-ended, deliberative dialogue (→ see **Communication Rules, Player Engagement**).

7.4.4.5 NEW! Player Relationships

Definition: Player relationships describe how degrees of familiarity—ranging from strangers to close peers—shape comfort, confidence, and communication in gameplay. Pre-existing ties influence not only who speaks and how openly, but also how group norms and hierarchies form during discussion. ↔ See also Sections 7.4.4.5, 8.4.1.1, and 10.1.3.5.

Player familiarity—whether between strangers, siblings, or parents and children—strongly influenced how participants interacted and debated across the **Parliament** prototypes.

- **Rulebook** and **Indoor Parliament:** Sessions often involved pre-existing groups, which fostered ease, confidence, and open dialogue.
- **Street Parliament:** Attracted a more unpredictable mix—some participants joined through Facebook or *OFF-Biennale Budapest* (T6_20150517; T7_20150517), while others were drawn in spontaneously by the game’s striking appearance: “Thanks to its innovative, contemporary, and artistic visual design, it is visually striking and easily draws passersby into a short street game.”⁵⁵ (E_20141112b). The format also attracted foreign tourists, prompting calls for an English version (T7_20150517).

These varying relationships most notably shaped interaction in **Step 1: Teaming Up** and **Step 4: Defense Speech & Free Debate** of **Street Parliament**:

- **Step 1: Teaming Up:** *Unfamiliarity* prompted facilitators to initiate ice-breakers (e.g., sharing names and hometowns) to reduce hesitation (T11_20150531).
- **Step 4: Defense Speech & Free Debate:**

54 „nagyon eltérő véleménye van az embereknek. És akkor próbálják meggyőzni egymást. Szóval tényleg nagyon-nagyon meglepően hatékony [a játék]. Középiskolásoknál halál unalomba odaállnak, szenvednek, és 10 perc alatt elkezdik egymást meggyőzni.”

55 „Innovatív, kortárs, művészi vizuális kialakításának köszönhetően látványos, így könnyen bevonzja az arra járókat egy rövid utcai játékba.”

- *Parent–child dynamics*: When asked whether there are enough trash bins on the streets, the parent argued “no,” citing urban litter, while the child hesitantly answered “yes,” noting that the real issue was people’s behavior rather than infrastructure. The parent’s surprise turned to pride as the child confidently voiced a differing opinion (T11_20150531; kultúrAktív Egyesület, 2015, August 28).
- *Siblings*: Typically reached consensus quickly, likely due to shared experiences and values: “There was strong agreement between the siblings, while the adults held differing opinions—though at times they managed to convince one another”⁵⁶ (T11_20150531).
- *Hierarchical patterns*: Family and school hierarchies sometimes re-emerged during debate—adults assumed “the role of a patient instructor”⁵⁷ (T11_20150531) to support younger players (T10_20150524), while confident students occasionally overshadowed quieter peers (T4_20150512; T5_20150513).

In sum, familiarity fostered comfort but could also reinforce hierarchy. Unfamiliar or mixed groups, while requiring more facilitation, tended to generate richer and more varied discussions.

7.4.4.6 NEW! Player Diversity

Definition: Player diversity refers to the range of social, cultural, and experiential backgrounds through which participants interpret and communicate about landscapes. From a social constructivist view, diversity expands the pool of meanings and narratives that can emerge, revealing how different groups construct and contest what a landscape represents or should become. ↔ See Sections 7.4.4.6, 9.4.3.2.2, and 10.1.3.6.

In *Street Parliament*, due to its open and spontaneous recruitment process (→ see *Player Relationships*), diversity in participants’ social and experiential backgrounds often sparked vibrant and meaningful discussions: “Once the rules were clarified, there was little need to moderate the debates. A wide range of perspectives emerged, and the game unfolded in a constructive manner”⁵⁸ (T11_20150531).

Participants brought distinct social, economic, and geographical viewpoints, surfacing arguments that might otherwise go unvoiced: “The composition of the players was particularly exciting; it brought to light many aspects that the average

⁵⁶ „A testvérpár között nagy volt az egyetértés, a felnőtteknél különböző vélemények voltak, de volt h[ogy] sikerült meggyőzniük egymást”

⁵⁷ „türelmes oktató szerepe”

⁵⁸ „A szabályok tisztázása után a vitákat irányítani nem volt igazán szükséges, rengeteg szempont előkerült, konstruktív játék volt”

person wouldn't even consider in everyday life!" (T7_20150517)⁵⁹; and "I really appreciated the diversity of arguments and reactions stemming from different contexts—for instance, the contrast between perspectives from the capital and the metropolitan periphery, or between social and economic reasoning."⁶⁰ (T6_20150517).

Firsthand insights frequently emerged. For instance, a wheelchair user introduced a perspective others had not considered: "[...] this is a major issue for wheelchair users: their hands get dirty, they are exposed to numerous infections, it's uncomfortable, and they have to concentrate on both wheels at the same time."⁶¹ (T7_20150517).

In sum, when participants represented a range of lived experiences, player diversity fostered richer, more inclusive, and more dynamic communication. It introduced fresh perspectives, challenged assumptions, and created moments of collective learning.

7.4.4.7 NEW! Player Age (Mixed-Age Groups, Adolescents and Children)

Definition: Player age shapes how individuals perceive, interpret, and communicate about landscapes. It reflects stages of landscape socialization—the process through which people learn cultural meanings, values, and norms associated with places. Age thus influences reasoning pace, vocabulary, and how players position themselves toward landscape issues during gameplay.

↔ See Sections 7.4.4.7 and 10.1.3.2.

While *Rulebook* and *Indoor Parliament* involved adults and experts, *Street Parliament* revealed age as a key factor shaping communication. Distinct patterns emerged across mixed-age groups, adolescents, and children.

- **Mixed-age groups** fostered intergenerational dialogue marked by contrasting perspectives and moments of mutual understanding.
 - *Reasoning styles varied:* "[...] children and adults played together, which allowed us to observe how different age groups argue at varying levels of depth: younger children tended to reason along social and solidaristic lines, while older ones adopted more economic and objective perspectives."⁶² (kulturAktív Egyesület, 2015, August 28) (→ see **Player Diversity**).
 - *Communication pace differed:* older participants needed more time

59 „A játékosok összetétele azonban rendkívül izgalmas volt, sok új dolgot hozott felszínre, amire nem is gondol a mindennapi ember!”

60 „Nagyon tetszettek a különböző kontextusból érkező reakciók és érvek: pl. fővárosi és agglomerációs érvek közötti különbség, társadalmi és gazdasági érvek.”

61 „[...] a kerekesszékeseknél ez nagyon nagy probléma, mert összekezenik a kezüket vele, rengeteg fertőzést kapnak el, kényelmetlenség, és két kerékre kell figyelniük [egyszerre].”

62 „[...] kicsik és nagyok vegyesen játszottak velünk, így megismerkedhettünk a korosztályok különböző mélységű érveléseivel: a kisebbek társadalmi vonalon, szolidárisan, a nagyobbak inkább gazdasági szempontból, tárgyilagosan érveltek.”

to form responses, while younger ones sometimes grew impatient. This imbalance required active facilitation: “The composition of the group influenced the flow of the game; the only elderly team member needed more time to formulate responses and required more conversation to engage in meaningful debate”⁶³ (T6_20150517); and “I felt the team was somewhat impatient with the 65-year-old participant, which perhaps the facilitator’s attitude could help to mitigate”⁶⁴ (T6_20150517).

- Despite these challenges, shared understanding often emerged: “We experienced how our views could be harmonized through dialogue, and how our opinions and diverse perspectives not only shape one another, but also contribute to shaping our shared spaces.”⁶⁵ (kultúrAktív Egyesület, 2015, August 28).
- **Adolescents (high school students)** developed their own communication rhythm.
 - The game worked well in school settings (T4_20150512; T5_20150513), yet students often resisted unfamiliar urban concepts—such as mobile libraries (T4_20150512)—preferring known, concrete solutions (E_20150513a; kultúrAktív Egyesület, 2015, August 28).
 - However, when prompted with relevant, contemporary topics, they participated deeply: “the game also addresses questions and topics relevant to this age group, and it would be worth implementing it in classes such as environmental studies, social studies, or homeroom sessions”⁶⁶ (kultúrAktív Egyesület, 2015, August 28).
- **Children (under 12)** required entirely different communicative structures.
 - Abstract debate and reasoning tasks failed to engage them: “In this case, the question cards turned out to be completely unusable”⁶⁷ (T11_20150531).
 - Instead, visual and tactile tools—such as magnetic shapes and colors—enabled participation: “based on the visual world of the magnetic game elements, we discussed participants’ experiences

63 „A csapat összetétele befolyásolja a játék menetét, az egyedüli idősebb csapattagnak több időre volt szüksége a válaszok kialakításához, és több beszélgetésre a megfelelő vita kialakításához”

64 „Kicsit úgy éreztem, hogy a csapat türelmetlenebb a 65 évessel szemben, amit talán a játékvezető hozzáállása segíthet feloldani”

65 „Megtapasztaltuk, hogy nézeteink a párbeszéden keresztül harmonizálhatóak, és hogy véleményünkkel és különböző látásmódunkkal nem csak egymást, de tereinket is építhetjük.”

66 „a játék e korosztály számára is aktuális kérdéseket, témákat feszeget, és érdemes lenne akár környezetismeret-, társadalomismeret- vagy az osztályfőnöki órákon is bevetni”

67 „Ebben az esetben a kérdés kártyák teljesen használhatatlanok voltak”

and explored relationships between forms and colors.”⁶⁸ (kultúrAktív Egyesület, 2015, August 28), and “They draw a card, find the matching building silhouette, and the corresponding color set.”⁶⁹ (T11_20150531).

Across these age groups, *Street Parliament* demonstrated that inclusive participation depends on adaptable facilitation—balancing pace, topic, and medium to sustain engagement across generations.

7.4.4.8 NEW! Player Affiliation

Definition: Player affiliation refers to the social and professional identities through which people interpret landscapes and assign meaning to them. From a social constructivist perspective, these affiliations—such as being a cyclist, parent, or architect—shape how players read spatial situations and express values in small-group communication. Affiliations act as cultural filters, reinforcing particular interpretations of what matters in a landscape and how it should function. ↔ See Sections 7.4.4.8 and 10.1.3.4.

In *Street Parliament*, shared affiliations surfaced clearly during discussions, shaping group priorities and the framing of arguments:

- *Cyclists* focused on mobility: “the nighttime street action provided a valuable opportunity to learn about the perspectives of the local cycling community regarding the development and current state of cycling culture.”⁷⁰ (kultúrAktív Egyesület, 2015, August 28).
- *Mobility-impaired participants* emphasized hygiene: “we learned that urban hygiene is a particularly sensitive issue for people with mobility impairments”⁷¹ (kultúrAktív Egyesület, 2015, August 28).
- *Urban vs. suburban residents* highlighted contrasting spatial needs and priorities (T6_20150517);
- *Architects* emphasized aesthetic and design considerations.
- *Parents* focused on the safety and inclusiveness of child-friendly spaces.⁷²

These examples show how affiliation-based perspectives can generate grounded, context-specific insights—but may also steer or dominate discussion, potentially narrowing broader exploration.

68 „mágneses játékelemek képi világa alapján beszélgettünk tapasztalatainkról és kerestünk forma-szín kapcsolatokat.”

69 „Húznak egy kártyát, megkeresik a megfelelő épület sziluettjét, a hozzá tartozó szín szettet.”

70 „az éjszakai utcai akció pedig jó alkalom volt arra, hogy a helyi biciklis közösség álláspontját is megismerjük a biciklis kultúra fejlesztéséről és aktuális helyzetéről.”

71 „azt tudtuk meg, hogy a mozgáskorlátozottak számára különösen érzékeny kérdés a városhigiénia”

72 These examples derive from additional testing sessions beyond the main study data; they are not coded with session numbers.

7.4.4.9 Player Engagement

Definition: Player engagement is the emotional and cognitive investment that draws participants into play. It grows through curiosity, anticipation, and the shared making of meaning—conditions that determine how actively and authentically players contribute to small-group communication. ↔ See Sections 6.4.2.1, 7.4.4.9, 7.4.6.2, 8.4.3.2, 9.4.3.2.1, and 10.1.3.8.

The design team's intent was clear: "The goal is to discuss the issues that shape our existence as urban dwellers. Whether you're walking down the street or part of a residential community, what matters is that dialogue begins between you and other city residents."⁷³ (Járókelők, 2015, August 3).

This aim resonated strongly with players, whose engagement stemmed from exchanging arguments and witnessing their opinions evolve. Participants enjoyed "Discussing a divisive issue."⁷⁴ (M13_20150806), "They enjoyed the game and were stunned by each other's arguments; they were glad to have been asked for their opinion."⁷⁵ (T6_20150517). Many described feeling listened to and accepted (M13_20150806)⁷⁶.

Facilitators noted that excitement was often driven by the diversity of backgrounds (→ see **Player Diversity, Player Relationships**): "[...] the game initiates dialogue [...] it really does trigger a lot of debate. And what's particularly interesting is that when players come from different backgrounds, they immediately start arguing."⁷⁷ (Tilos Rádió 90.3, 2015, August 8).

Rather than transmitting knowledge directly, the game encouraged players to learn through each other's experiences: "the new game is much less focused on direct teaching; rather, it aims to encourage people to learn about each other's opinions and talk about the things they disagree on"⁷⁸ (Járókelők, 2015, August 3). Facilitators noted that this approach ignited curiosity, fostered empathy and reflection, and helped reconcile diverse positions (M13_20150806)⁷⁹. As one put it, "[...] when you play, your opinion can actually change on certain issues—and there were plenty of examples of that."⁸⁰ (Tilos Rádió 90.3, 2015, August 8).

73 „A cél, hogy megvitassuk azokat a kérdéseket, amelyek városlakóként meghatározzák a létünket. Akár, ha utcán sétálsz, akár, ha egy lakóközösség tagja vagy, az a fontos, hogy a párbeszéd meginduljon közted és a többi városlakó közt.”

74 „Megosztó kérdés megvitatása”

75 „Tetszett nekik a játék, meg voltak döbbenve egymás érvein, [...] örültek, hogy kikérték a véleményüket.”

76 „meghallgat”, „elfogad”

77 „[...] párbeszédet indít [...] tényleg rengeteg vita alakul ki. És nagyon érdekes, hogyha különböző háttérű [...], játékosok) azonnal elkezdene vitatkozni.”

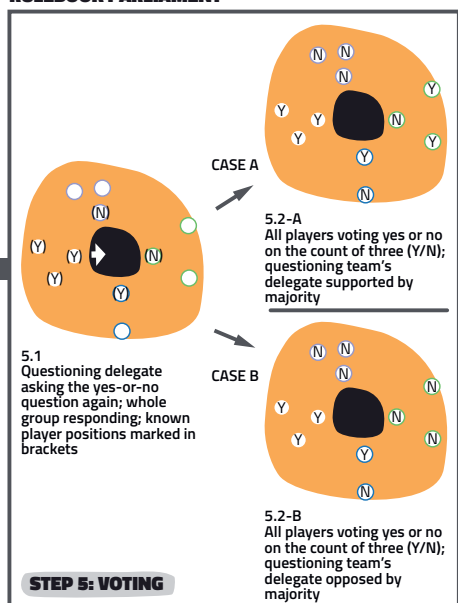
78 „az új játék sokkal kevésbé akar direktben tanítani, inkább azt szeretné elérni, hogy az emberek megismerjék egymás véleményét és beszélgessenek arról, amiben nem értenek egyet”

79 „felkelti az igényt”, „különböző vélemények összeccsiszolása”

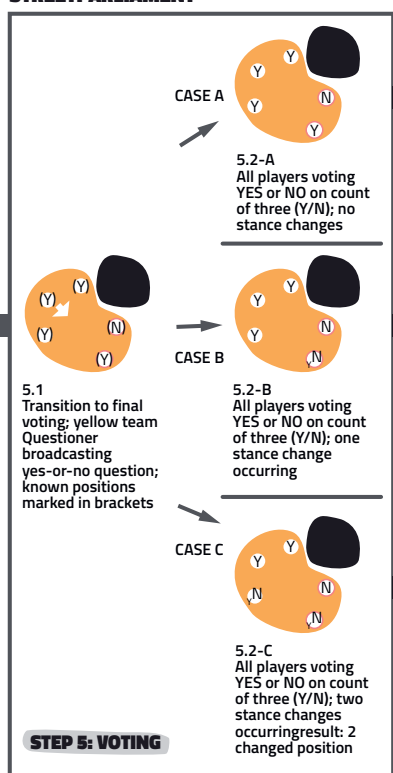
80 „[...] hogyha játszol, akkor bizonyos dolgokban megváltozhat a véleményed, elég sok példa volt erre.”

7.4.5 Step 5: Voting

RULEBOOK PARLIAMENT

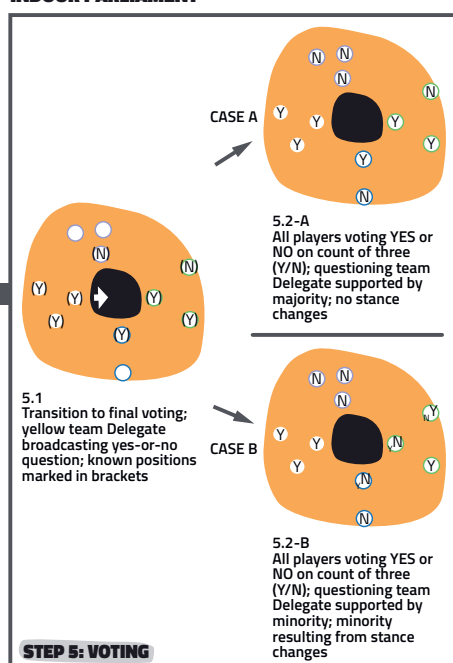


STREETPARLIAMENT



DIFFERENCE 5 – REFLECTIVE VOTING

INDOOR PARLIAMENT



DIFFERENCE 3 – REVISABLE VOTING

Fig. 7.8 **Parliament**: Step 5: Voting. Comparative detail from the foldout diagrams shown in Figs. 7.1–7.3. Graphic by the author

In **Step 5: Voting** Fig. 7.8, players reach the formal decision-making moment of **Parliament**, where collective choices determine how many magnetic construction points are awarded. Although **Rulebook**, **Indoor**, and **Street Parliament** follow the same ritual—reading the question aloud (**Snapshot 5.1**), counting to three, and responding with a simultaneous yes/no gesture (**Snapshot 5.2**)—the meaning and outcome of voting differed across prototypes.

- **Rulebook Parliament**: Players typically reaffirmed their initial stance, with no observed changes. If the questioning

team's position gained majority support (**Case A, Snapshot 5.2-A**), they received maximum points and proceeded to construction. If not (**Case B, Snapshot 5.2-B**), they earned fewer points.

- **Indoor Parliament:** Two participation patterns emerged. **Case A (Snapshot 5.2-A)** shows all players maintaining their original positions. **Case B (Snapshot 5.2-B)** shows some players shifting stance due to arguments presented in **Step 4: Defense Speech & Free Debate**. For example, a blue team delegate switched from “yes” to “no” (C_YN), while a green member changed from “no” to “yes” (C_NY). These reversals demonstrated that even less vocal participants were influenced by the preceding discussion.
- **Street Parliament:** Voting reflected participants' evolving individual views rather than team alignment. In **Case C (Snapshot 5.2-C)**, even members of the questioning team occasionally changed position, indicating that deliberation outweighed loyalty. The gesture-based vote thus became an authentic expression of individual conviction, better capturing real shifts in participants' views.

Across prototypes, the shared ritual of voting shifted from confirmation to reflection. What began as a rule-bound expression of team stance became—in the street context—a visible outcome of deliberation and opinion change.

7.4.5.1 Symbolism in Gameplay

Definition: Symbolism in gameplay refers to the implicit messages embedded in a game's terminology, mechanics, and visual cues. These symbolic elements shape how players interpret rules, roles, and outcomes—guiding communication toward competition, cooperation, or deliberation. ↔ See Sections 7.4.4.4, 7.4.5.1, 8.4.7.2, 9.4.2.4, 9.4.5.2, and 10.1.2.9.

In **Step 5: Voting**, symbolic meaning deepened as voting shifted from a scoring mechanism to a public act of collective expression. Originally, the gestures of hand-raise for “yes” and squat for “no” were designed to determine points for the questioning team—signifying the persuasive strength of arguments in **Rule-book Parliament**.

In **Indoor** and **Street Parliament**, however, these gestures took on broader civic resonance. In **Indoor Parliament**, players who had not spoken in **Step 4** still changed their votes, showing that reflection extended beyond verbal debate. In **Street Parliament** even questioning team members revised their stances, moving beyond group loyalty. Voting thus became a real-time expression of individual judgment rather than team alignment.

This evolution echoed the game's motto—“the city where you make the decisions”⁸¹ (E_20150525)—transforming voting into a symbolic act of decision-making. What began as a mechanism of point allocation became a performative gesture of shared decision-making (→ see **Scoring System**), blurring the line between gameplay and public deliberation.

81 „a város, ahol te hozod a döntéseket”

7.4.6 Final Step: Constructing with Consensus

The **Final Step: Constructing with Consensus** translates prior communication—clashes, debates, and votes—into tangible form on the city model. Although speech largely ceases, this phase materializes earlier negotiation: scores are converted into magnetic construction points, turning the scoring system into a communicative tool that makes agreement visible.

Fig. 7.9 depicts two key scoring moments.

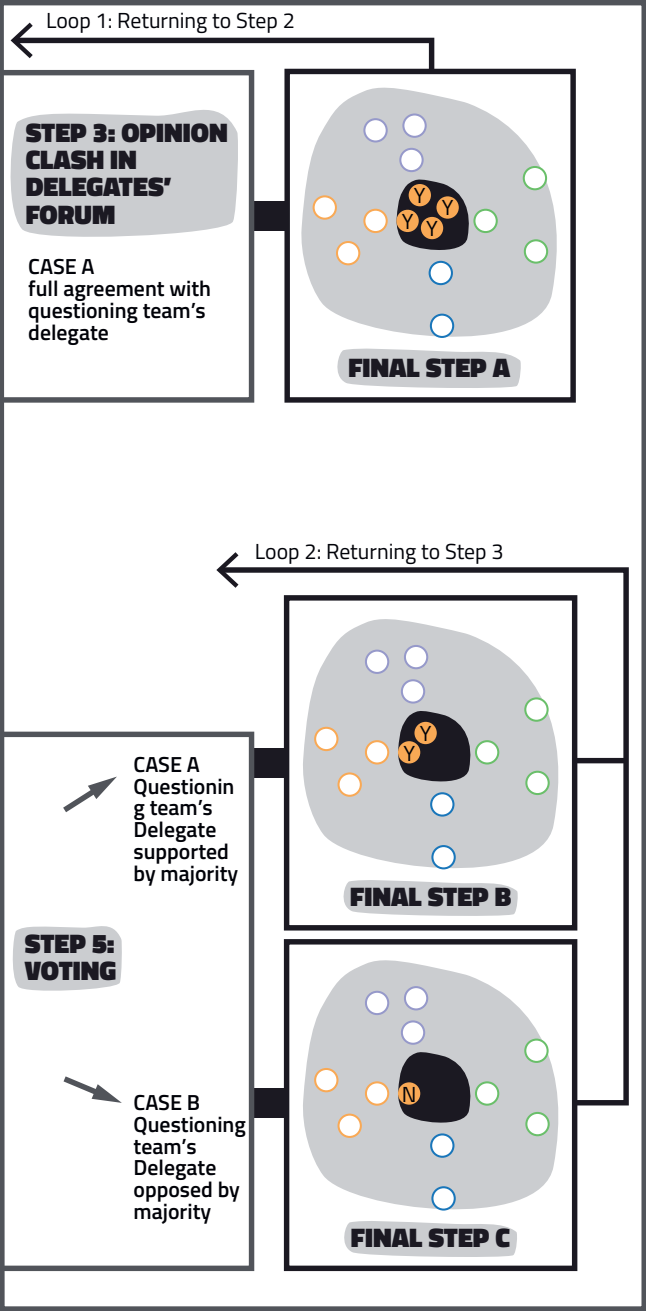
- The first row shows early point gains from initial alignment in **Step 3: Delegates' Forum & For All**.
 - **Rulebook Parliament:** Delegate alignment earned one point, with “yes” or “no” labels marking stance (letter and team color code) (**Final Step A**).
 - **Indoor** and **Street Parliament:** Full consensus earned the maximum score (four orange points), rewarding swift agreement (**Final Step A**).
- The second row reflects how scoring responded to the depth and outcome of debate after **Step 4: Defense Speech & Free Debate** and **Step 5: Voting**.
 - **Rulebook Parliament:** Voting produced binary outcomes (yes/no), maintaining a simple majority tally (**Final Step B**).
 - **Indoor Parliament:** Scores reflected degrees of agreement—consensus earned three points (**Final Step B**), while minority positions received fewer (**Final Step C**).
 - **Street Parliament:** Followed the same 4–3–2–1 scale (4 = consensus, 3 = majority, 2 = tie, 1 = minority) but introduced a new possibility: questioning team members could change stance.
 - **Final Step B:** Majority with no stance changes.
 - **Final Step C:** Majority achieved through non-questioning players shifting stance.
 - **Final Step D:** Minority outcome when the questioning team itself changed stance.

These shifts show how, even within a structured scoring logic, players often prioritized deliberation over competition. Many revised their views or stepped beyond team interests, transforming construction from a display of results into a collective act of civic synthesis.

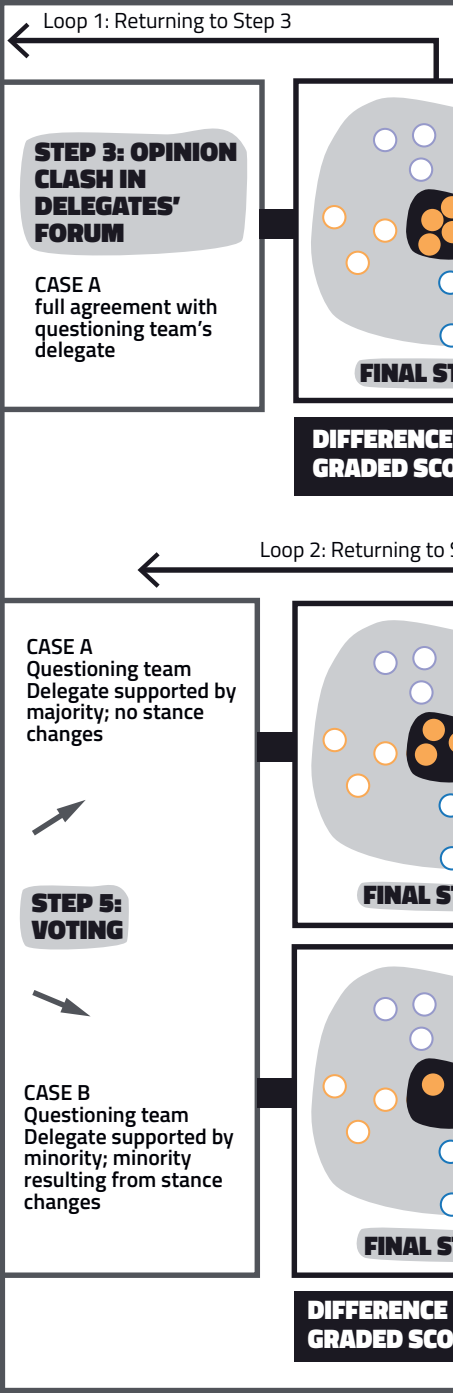
7.4.6.1 Scoring System

Definition: Scoring systems are the mechanics that reward player actions and track progress. They shape how participants perceive success and steer communication toward specific dynamics—such as competition, cooperation, or consensus—depending on how outcomes are incentivized. ↔ See Sections 6.4.4.1, 7.4.6.1, 8.4.7.1, 9.4.5.1, and 10.1.1.11.

RULEBOOK PARLIAMENT



INDOOR PARLIAMENT



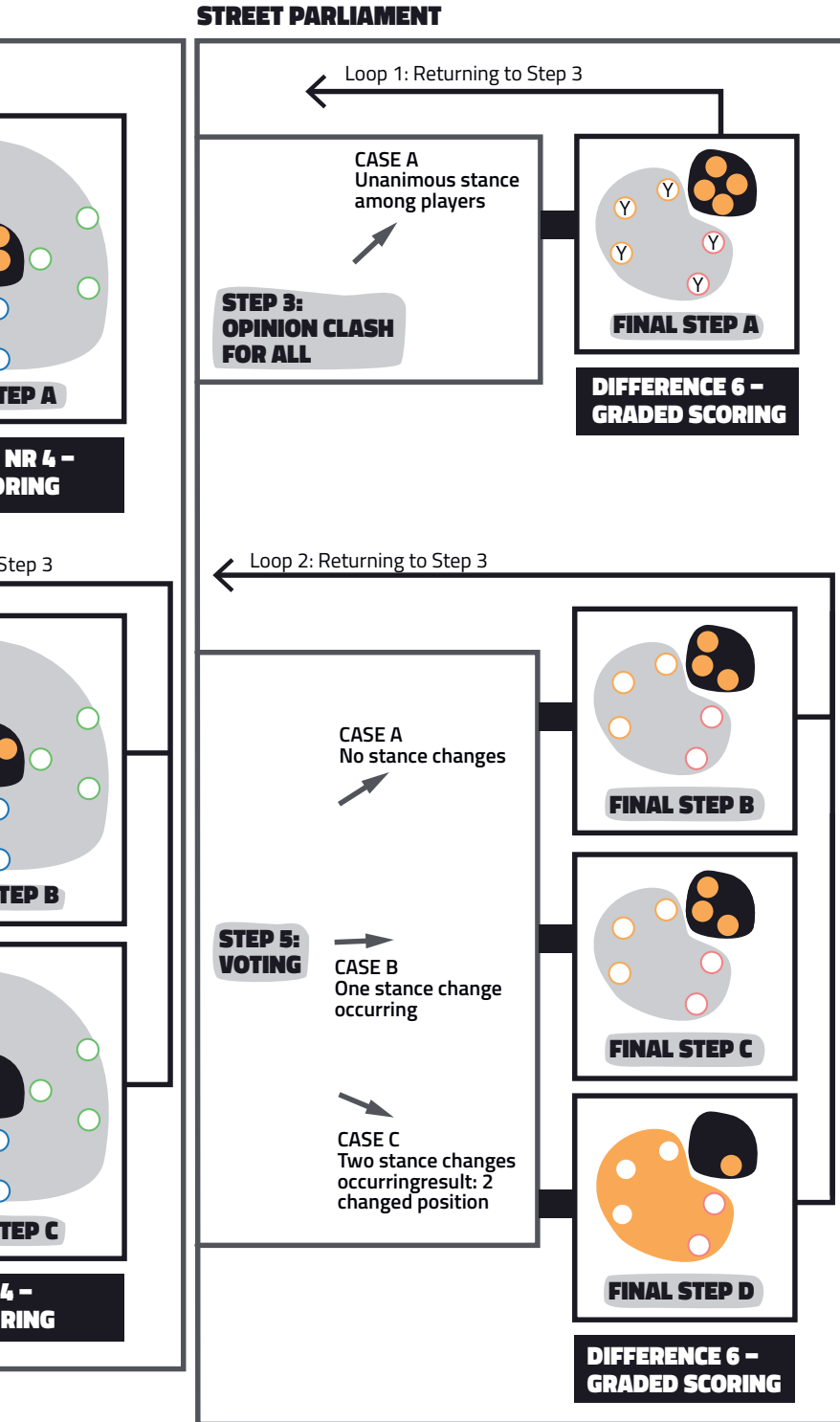


Fig. 7.9 Parliament: Final Step: Constructing with Consensus. Comparative detail from the foldout diagrams shown in Figs. 7.1–7.3. Graphic by the author.

In **Parliament**, scoring and construction mechanisms were designed to register progress and symbolize the quality of achieved consensus (→ see **Symbolism in Gameplay**). Across all three prototypes—**Rulebook**, **Indoor**, and **Street Parliament**—the first scoring event (**Final Step A**) rewarded immediate agreement among team delegates in **Step 3: Delegates' Forum & For All**, inheriting the scoring logic from the **Clash** prototype. This condition remained consistent across formats.

However, when disagreement persisted, scoring logic diverged:

- **Rulebook Parliament**: The questioning team presented a defense in **Step 4: Defense Speech**, followed by *collective voting* in **Step 5: Voting**. The majority outcome was then translated onto the city model, serving as a visible trace of group opinion.
- **Indoor** and **Street Parliament**: Introduced tiered scoring after **Step 5**, assigning points based on the degree of consensus (4 = consensus, 3 = majority, 2 = tie, 1 = minority). This system aimed to reward both persuasive ability and group alignment—"the level of consensus"⁸² (E_20150729).

Yet, as debate formats evolved (→ see **Communication Rules**), persuasive defense became secondary to open-ended discussion (→ see **Player Engagement**). **Step 5: Voting** came to be experienced as a symbolic act of collective will (→ see **Symbolism in Gameplay**). When scoring results no longer mirrored players' final positions—especially when opinions shifted during debate—confusion arose (T10_20150524). Facilitator reflections confirmed this tension: "it doesn't really add much to the game."⁸³ (E_20150518c); and "the sticker placement just didn't lead to anything meaningful."⁸⁴ (E_20150518c).

Overall, while the scoring system aimed to measure persuasion and consensus, players ultimately valued dialogue and reflection more than numeric results.

7.4.6.2 Player Engagement

Definition: Player engagement is the emotional and cognitive investment that draws participants into play. It grows through curiosity, anticipation, and the shared making of meaning—conditions that determine how actively and authentically players contribute to small-group communication. ↔ See Sections 6.4.2.1, 7.4.4.9, 7.4.6.2, 8.4.3.2, 9.4.3.2.1, and 10.1.3.8.

In **Parliament**, engagement influenced how participants related both to game mechanics and to group interaction. For adults, enthusiasm peaked during **Step 4: Defense Speech & Free Debate**, where exchanging opinions and constructing arguments generated a sense of purpose and momentum.

By contrast, the **Final Step: Constructing with Consensus** revealed a different type of engagement—especially among younger participants. Children

⁸² „[...]az egyetértés mértékét”

⁸³ „nem ad a játékhoz igazán sokat”

⁸⁴ „csak nem jön ki a matricázásból semmi”

found joy in the tactile act of arranging magnetic construction points, drawn to its visual and physical immediacy (E_20150518c).

High school students, however, remained more focused on the debate itself than on the physical construction. As one facilitator observed: “When placing the elements, the students paid little attention to aesthetic considerations; they found it easier to place them quickly and randomly, or even intentionally in unconventional positions.”⁸⁵ (E_20150513a).

Among adults, the final placement phase often lost relevance. Immersed in earlier discussions, they frequently delegated sticker placement or disengaged from its symbolic meaning. One facilitator noted: “In the final round, we placed the stickers inside the magnetic buildings. I was sitting in the middle and did the sticking myself, because it was faster that way. Naturally, the adults were the ones who gave up on placing stickers, although they were observing—they just didn’t really understand what we were putting on or why.”⁸⁶ (E_20150518c).

These patterns reveal how player engagement varies across age groups and game phases. While deliberation sustained adult interest, tangible interaction captivated children.

7.4.7 All Steps: Cultural Representations

Definition: Cultural representation in games refers to how mechanics, roles, and interactions reflect or challenge societal values, norms, and power structures. Design choices—such as who speaks, how decisions are made, or what is rewarded—implicitly convey messages about authority, inclusion, and co-operation. ↔ See Sections 7.4.7, 8.4.8, 9.4.6, and 10.1.2.10.

Unlike other factors tied to specific steps, cultural representation unfolded across all phases of *Parliament*. The game was deliberately designed to simulate representative decision-making, prompting reflection on how societal structures shape participation (M6_20150124; M7_20150207). In **Step 3: Opinion Clash in Delegates’ Forum & For All**, delegates spoke on behalf of their teams; in **Step 4: Defense Speech & Free Debate**, they defended or negotiated those positions; and in **Step 5**, all players cast visible votes that expressed majority opinion.

This structure raised internal debate among designers. One questioned whether the format reinforced existing hierarchies rather than modeling open participation: “in the spirit of avoiding what we have grown used to, I would not reinforce social hierarchy—which, let’s face it, exists even in democracies. This is visible in the [Parliament] game as well, where certain roles or positions are

85 „Az elemek felrakásánál a diákok nem igazán törődtek esztétikai szempontokkal, jobban kézre állt nekik gyorsan random, esetleg direkt a megszokottól eltérő helyre feldobni az elemet.”

86 „Az utolsó körben [a mágneses épületeken] belülre ragasztottuk a matricákat, én középen ültém és én ragasztgattam, mert így gyorsabb volt. Persze a felnőttek voltak, akik lemondtak a matricázásról, de figyelték, csak nem igazán értették, mit teszünk fel és miért.”

clearly privileged. In my view, this leads the message in the wrong direction.”⁸⁷ (E_20150126b).

Over time, this concern became more evident as players adapted the game to better match their preferred modes of interaction:

- **Rulebook Parliament:** Concentrated decision-making in delegate roles, reinforcing a representative and top-down model.
- **Indoor Parliament:** Players increasingly spoke beyond their assigned roles, moving toward more horizontal dialogue.
- **Street Parliament:** The delegate structure was removed entirely, allowing all participants to speak and decide together.

These iterations reflect a clear player preference for inclusive communication. Participants sought to express their own views rather than having them mediated. As one design note summarized, the intent became to “stimulating autonomous thinking, encouraging both action AND cooperation.”⁸⁸ (E_20150126b).

By embedding evolving models of democracy into gameplay, **Parliament** became a testbed for exploring alternative civic interactions—particularly within the Hungarian context, where hierarchical structures often limit opportunities for public participation (see Chapter 5).

7.4.8 Facilitation Tasks

Fig. 7.1, Fig. 7.2, and Fig. 7.3 visualize how small-group communication unfolded across the three **Parliament** variants. While these diagrams highlight shifts in spatial logic, dialogue structures, and participation formats, they do not depict the facilitator—yet facilitation proved central to enabling meaningful interaction throughout gameplay.

The thematic analysis revealed that facilitation extended far beyond rule enforcement. As gameplay moved into public spaces and engaged diverse, spontaneous groups, facilitators became co-creators—actively shaping environments, responding to participants, guiding discussions, and supporting reflective closure. Facilitation thus evolved from background maintenance into an adaptive, interactive practice.

Four recurring facilitation tasks emerged as key to sustaining inclusive and focused small-group communication:

- **Preparing the Communication Setting:** Selecting and arranging suitable public locations, responding to weather and noise, and ensuring comfort and audibility.

⁸⁷ „a megszokástól mentesség jegyében nem a társadalmi hierarchiát erősíteném (akárhogy is nézzük, ez a demokráciában is megvan, és ez a [Parlament] játékból [...] is látszik, vannak kiemelt szerepkörök, vagy helyzetek, sztem ez nem jó irányba viszi az üzenetünket”

⁸⁸ „önálló gondolkozás beindítása, cselekvésre ÉS együttműködésre ösztönzés”

- **Adapting to Player Needs:** Adjusting communication strategies according to participant age, background, and interaction style.
- **Facilitating Discussion and Debate:** Supporting inclusive dialogue, balancing turn-taking, and maintaining neutrality.
- **Concluding with Reflection:** Structuring post-game discussions that help participants process experiences and consolidate shared insights.

The following sections detail each facilitation task, showing how facilitators created the conditions for **Parliament** to function as a civic communication platform in diverse urban contexts.

7.4.8.1 NEW! Preparing the Communication Setting

Definition: Preparing the communication setting involves selecting and arranging the physical and environmental conditions before gameplay begins. This includes choosing suitable locations, organizing layout, and anticipating factors such as noise, weather, and comfort to enable focused, inclusive, and sustained small-group communication. ↔ See Sections 7.4.8.1 and 10.2.1.

Transitioning **Parliament** into outdoor public spaces introduced new challenges for facilitation. Facilitators had to select locations that minimized distractions and discomfort while preserving visibility and accessibility. Environmental comfort emerged as a precondition for maintaining attention and engagement. As one facilitator stressed: “There should be no noise! Especially not a concert nearby—although other programs are fine.”⁸⁹ (T8_20150517). Another highlighted basic physical comfort: “playing in direct sunlight is uncomfortable; partial shade would be preferable”⁹⁰ (T8_20150517).

Urban contexts demanded constant adjustments. Conditions that initially supported communication could shift rapidly due to wind, crowd movement, or ambient noise. Facilitators therefore repositioned materials and participants to maintain audibility and visibility (→ see **Player Audibility, Ambient Conditions, Game Context**). For example: “It was very windy, so we had to keep an eye on the boards as they kept falling over.”⁹¹ (T6_20150517) or “during the gathering around the game, players needed to be guided into a formation where they could hear each other better”⁹² (T11_20150531).

Fluctuating group sizes required additional logistical flexibility (→ see **Group Size, Group Division**). Larger groups were sometimes divided into two rotating subgroups—while one subgroup continued the game, the other engaged in parallel workshop activities, and the two later switched roles (E_20150513a). Smaller groups occasionally required facilitators to step into

89 „Ne legyen hangzavar! Főleg ne koncert esemény, de más programok igen!”

90 „tűző napon játszani kényelmetlen, legyen inkább félárnyék”

91 „Nagyon szeles idő volt, ezért a táblákra figyelni kellett, mert eldőlték”

92 „játék körülállásakor terelni a játékosokat, hogy egy olyan formációt vegyenek fel, amiben jobban hallják egymást”

the game themselves to sustain interaction (T6_20150517; T7_20150517; T8_20150517). As one facilitator summarized: “Different group sizes required different methods. [...] I had to rely heavily on improvisation.”⁹³ (T11_20150531).

Through these practices, facilitators were not simply managing logistics—they were actively shaping time, space, and atmosphere to make meaningful communication possible under unpredictable urban conditions.

7.4.8.2 NEW! Adapting to Player Needs

Definition: Adapting to player needs refers to the facilitator’s role in adjusting communication structures to match participants’ backgrounds, capacities, and interaction styles—so everyone can participate meaningfully without losing the game’s communicative intent. ↔ See Sections 7.4.8.2, 9.4.7.1, and 10.2.3.

Public space sessions introduced a high degree of diversity and unpredictability. Unlike structured indoor events with educators or pre-registered participants, outdoor play gathered spontaneous groups of mixed ages, abilities, and social backgrounds. Facilitators had to assess these dynamics in real time and improvise their approach accordingly. As one facilitator explained: “I experimented with different techniques depending on the children’s ages. [...]”⁹⁴ (T11_20150531).

To sustain participation, facilitators applied context-specific engagement strategies tailored to different demographic groups:

- **Children under 12:** Supported through visual and tactile methods linking questions to magnetic construction elements, compensating for reading difficulties and short attention spans: “For children under 12, image-based questions are the most engaging; otherwise, they tend to become impatient and struggle with reading.”⁹⁵ (T11_20150531).
- **Youth over 12:** Balanced discussion with creative action, enjoying both answering questions and decorating buildings: “Children over the age of 12 are more willing to answer questions and enjoy decorating the buildings independently.”⁹⁶ (T11_20150531).
- **Families:** Required dual facilitation—engaging children in hands-on play while guiding adults in urban reflection: “With younger children, we walked around the buildings and decorated them together, while with parents and friend groups, we discussed issues related to urban life”⁹⁷ (kultúrAktív Egyesület, 2015, June 17).

93 „A különböző méretű csoportoknál más és más módszer működik jól. [...] Rendkívül nagy improvizációra volt szükségem.”

94 „A különböző korú gyerekekkel más és más technikát próbáltam ki. [...]”

95 „12 év alatt a képek alapján feltett kérdések az izgalmasak, különben türelmetlenek, olvasási gondokkal küzdenek”

96 „12 év felett egyesül is szívesen válaszolnak kérdésekre, vagy önállóan díszítik az épületeket.”

97 „kicsikkel az épületeket jártuk körben és díszítettük fel, míg a szülőkkel és baráti társaságokkal a városi élet kérdéseiről értekeztünk.”

- **Adults:** Made quick decisions but often needed prompts to share personal experiences: “the game proceeded smoothly; participants over 30 made quick decisions, they required more motivation to share their experiences with one another.”⁹⁸ (T11_20150531).
- **Mixed groups:** Benefited from diversity, which enriched conversations and encouraged tolerance. Facilitators paid particular attention to helping younger players articulate their views: “In mixed groups, supporting children in forming their own opinions plays a particularly important role.”⁹⁹ (T11_20150531) and “as a result, the entire dynamic of the game was shaped by explanation and tolerance”¹⁰⁰ (T11_20150531).

By responding to players’ needs in real time, facilitators created conditions for balanced participation, allowing diverse perspectives to surface through collaborative exchange.

7.4.8.3 NEW! Facilitating Discussion and Debate

Definition: Facilitating discussion and debate refers to the facilitator’s role in enabling inclusive, balanced, and constructive group dialogue. This includes moderating turn-taking, supporting diverse expression styles, and maintaining neutrality so all players are heard and exchanges stay meaningful. ↔ See Sections 7.4.8.3 and 10.2.5.

As **Indoor** and **Street Parliament** evolved toward open-ended debate formats, facilitation became increasingly conversational. Rather than simply enforcing rules, facilitators actively supported participants in expressing, questioning, and developing arguments. Their presence helped balance quick and reflective speakers, sustain engagement, and prevent dominant voices from overtaking quieter ones. “I felt the team was somewhat impatient with the 65-year-old participant, which perhaps the facilitator’s attitude could help to mitigate”¹⁰¹ (T6_20150517).

Neutrality proved essential. In several sessions, facilitators also acted as players, which risked shaping discussion unintentionally: “The facilitator also shared their own opinion, which may have contributed to the confusion [...]”¹⁰² (T8_20150517). This dual role highlighted the tension between participation and moderation—when facilitators spoke, their authority could inadvertently steer rather than support dialogue.

Facilitators also prevented over-politicization, keeping debates grounded in everyday urban issues rather than partisan positions (T7_20150517). Their role

98 „a játék gördülékenyen ment, a 30 év felettiek gyors döntéseket hoztak, jobban kellett őket motiválni, hogy megosszák egymással az élményeket.”

99 „A vegyes csoportoknál kiemelt szerepet kap a gyerekek véleményformálásának támogatása.”

100 „így az egész játék dinamikáját egyfajta magyarázó, toleráns jelleg övezi.”

101 „Kicsit úgy éreztem, hogy a csapat türelmetlenebb a 65 évessel szemben, amit talán a játékvezető hozzáállása segíthet feloldani”

102 „A játékvezető is elmondta a véleményét, ami talán ehhez a zavarodottsághoz hozzájárult [...]”

was to sustain a reflective yet open atmosphere—encouraging disagreement as a source of learning rather than conflict.

This task marked a clear shift from procedural control to dialogic mediation. Supporting inclusivity, neutrality, and conversational rhythm became key to maintaining meaningful and respectful group communication.

7.4.8.4 NEW! Concluding with Reflection

Definition: Concluding with reflection refers to the facilitator’s role in leading post-game discussions that help players process experiences, connect gameplay to broader themes, and consolidate shared insights. ↔ See Sections 7.4.8.4, 8.4.9.2, and 10.2.8.

Throughout testing, spontaneous debriefings frequently emerged—initiated by either players or facilitators. These sessions served two complementary purposes: informing design development and deepening participants’ reflection.

First, they offered feedback for iterative improvement. Players shared what they found engaging or confusing, particularly regarding construction and scoring: “It was raised that some kind of closing phase might be needed. For now, the result of the construction is not really interpretable—this part would be worth thinking through further.”¹⁰³ (E_20150513a). Others valued the exchange itself: “They enjoyed the game and were stunned by each other’s arguments; they were glad to have been asked for their opinion.”¹⁰⁴ (T6_20150517). Such insights later informed more structured evaluation tools—questionnaires, interviews, and facilitator reflections (E_20150518c).

Second, debriefings created a civic learning moment. Facilitators began introducing a short, structured closing phase, inviting players to revisit the magnetic constructions, recall key arguments, and identify shared insights (T11_20150531). This reflective walk encouraged participants to connect gameplay to broader urban or social issues: “and they requested a debriefing discussion after the game”¹⁰⁵ (T6_20150517).

Through these reflective practices, gameplay extended beyond participation into interpretation—transforming *Parliament* from a temporary communication exercise into a space for collective meaning-making and civic awareness.

7.5 Social Constructivist Landscape Theory Analysis

This section interprets the *Parliament* prototype from the perspective of social constructivist landscape theory, focusing on how communicative interaction

103 „Felmerült, hogy kellene vmiféle lezárás. Az építkezés eredménye egyelőre nem igazán értelmezhető, ezen még érdemes lenne kicsit tovább gondolni.”

104 „Tetszett nekik a játék, meg voltak döbbenve egymás érvein, [...] örültek, hogy kikérték a véleményüket.”

105 „és igényelték a játék után a levezető megbeszélést”

and evolving deliberative structures shaped the social construction of landscape meanings during gameplay.

The analysis follows two analytical dimensions introduced in Section 4.4.2.3: (1) the processes of landscape meaning-making through communication (Section 7.5.1), and (2) the mediation of differentiated knowledge stocks shaped by socialization (Section 7.5.2). From this perspective, the analysis explores how the iterative development of *Parliament*—from *Rulebook* version to *Street Parliament*—enabled increasingly complex processes of externalization, negotiation, and provisional stabilization of shared meanings.

7.5.1 Processes of Landscape Meaning-Making through Communication

The *Parliament* prototype marked a significant evolution from *Clash* through the introduction of *defense speeches* and *free debate* as core communicative elements of gameplay. The following interpretation draws on key concepts from Kühne's (2015b, p. 29) social constructivist landscape theory and Berger and Luckmann (1966) theory of the social construction of reality to reflect on how landscape meanings were produced and negotiated across different *Parliament* variants.

In the early phase of the game, participants formed teams, establishing the social setting for subsequent discussion and influencing which perspectives and experiences were likely to be voiced in the next step (**Step 1: Teaming Up**). When team members articulated their positions on the question (**Step 2: Opinion Clash in Teams**), individual interpretations were initially externalized into yes-or-no positions. In the *Indoor* and *Street Parliament* variants, these positions were subsequently discussed within teams before entering the plenary phase, allowing the articulation and exchange of reasons, experiences, and interpretations underlying these positions, as well as reciprocal feedback.

The subsequent plenary phase (**Step 3: Opinion Clash in Delegates' Forum & For All**) extended these dynamics into a broader arena. Delegates articulated positions on the selected question; in cases where prior team discussions had taken place (*Indoor* and *Street* variants), delegates could draw on provisional group-level positions. However, delegates who heard the question for the first time, articulated their individual interpretations.

Depending on the *Parliament* variant, the next phase led to two distinct communicative outcomes. In the *Rulebook* version, the process moved to a *defense speech* delivered by the questioning team's delegate (**Step 4: Defense Speech**). This format enabled the presentation of a coherent argumentative statement—sometimes representing a team position, sometimes an individual one—aimed at persuading participants in the subsequent vote. From a meaning-making perspective, this format primarily supported the articulation and framing of an interpretation, but offered limited opportunity for its modification through interaction.

In contrast, the *Indoor* and *Street Parliament* variants opened this phase to debate-oriented interaction. Follow-up questions, counterarguments, and spontaneous contributions—by delegates in the *Indoor* version and by all participants

in the **Street** version—created space for justification, contestation, and reinterpretation (**Step 4: Free Debate**). Here, discussion enabled participants to voice individual interpretations and to respond to others, allowing meanings to shift, align, or remain in tension through reciprocal engagement.

Voting (**Step 5**) therefore served different functions across variants. In the **Rulebook** version, voting often reflected initial positions and functioned primarily as a formal closure. In the **Street Parliament** variant, by contrast, extended debate was frequently accompanied by observable shifts in positions and perspectives. These changes became particularly visible due to the smaller number of participants and the fact that all players took part both in deliberation and in voting. In the final collective construction phase (**Final Step: Constructing with Consensus**), negotiated positions were translated into a shared spatial representation, giving material form to communicatively produced meanings.

Taken together, these communicative moments illustrate how landscape meanings were constructed and negotiated differently in across the Parliament versions. Observations suggest that debate-oriented formats were more likely to enable shifts in viewpoints, whereas presentation-oriented formats primarily supported the articulation of existing positions. The **Parliament** gameplay thus illustrates how key elements of social constructivist meaning-making described in the literature can unfold through extended deliberative processes.

The following subsections elaborate on selected aspects of this process, focusing on forms of externalization, internalization, and the construction of socially shared meanings across different **Parliament** variants.

7.5.1.1 Richer Externalization

The progression from **Rulebook** to **Street Parliament** versions demonstrated increasing openness in communication, fostering richer externalization of landscape meanings.

- **Rulebook Parliament** featured a one-minute *defense speech* delivered by a team delegate, aiming to persuade all players. Other participants could neither challenge nor expand upon the presented argument.
- **Indoor Parliament** partially loosened the communication rules: multiple team members were allowed to deliver *defense speeches* or counterarguments, creating opportunities for multi-voiced exchanges.
- **Street Parliament** removed structured turns entirely, allowing players to articulate and challenge diverse perspectives, thereby deepening the process of meaning-making. However, the complete absence of strict facilitation occasionally led to difficulties in maintaining pace and structure.

7.5.1.2 Partial Internalization

The **Street Parliament** version also fostered conditions conducive to internalization, where players reconsidered and modified their stances during discussions. As facilitators observed: “What I took away from this is that when you play, your opinion can actually change on certain issues—and there were

plenty of examples of that.”¹⁰⁶ (Tilos Rádió 90.3, 2015, August 8). This aligns with Berger and Luckmann (1966) concept of internalization, demonstrating how open, participatory dialogue can lead to genuine shifts in individual landscape perceptions.

7.5.1.3 Partial Construction of Socially Shared Meanings

Through deliberation, participants often achieved harmonization of views, constructing socially shared meanings: “We experienced how our views could be harmonized through dialogue, and how our opinions and diverse perspectives not only shape one another, but also contribute to shaping our shared spaces.”¹⁰⁷ (kultúrAktív Egyesület, 2015, August 28). This illustrates the essence of social constructivism: through communicative processes, collective understanding emerges and can inform real-world landscape and urban development decisions.

7.5.2 Mediation of Differentiated Knowledge Stocks through Game Structures

Street Parliament gameplay revealed how differentiated knowledge stocks—shaped by primary, secondary, and tertiary socialization—were filtered, amplified, or suppressed by the game’s communicative structure. The diversity of player groups (youth and adults, urban and rural residents, professionals, and participants with varied bodily experiences) created the potential for rich plural perspectives. Facilitators highlighted this diversity: “The composition of the players was particularly exciting; it brought to light many aspects that the average person wouldn’t even consider in everyday life!”¹⁰⁸ (T7_20150517).

Secondary socialization was especially visible among student groups, where formal education and peer norms shaped attitudes toward urban innovation. High school students tended to favor conventional solutions and resisted experimental ones, such as the idea of a library-equipped bus, which they dismissed as unnecessary (T4_20150512). Teachers, in contrast, saw educational potential, suggesting *Parliament* could foster critical thinking, broaden perspectives, and challenge normative expectations (kultúrAktív Egyesület, 2015, August 28). Primary socialization surfaced when participants defended changes to their home landscapes, while professionals contributed tertiary perspectives grounded in disciplinary expertise.

How these knowledge stocks appeared—or remained latent—depended on the progression of communicative steps:

106 „Azt szűrtem le, hogyha játszol, akkor bizonyos dolgokban megváltozhat a véleményed, elég sok példa volt erre.”

107 „Megtapasztaltuk, hogy nézeteink a párbeszéden keresztül harmonizálhatóak, és hogy véleményünkkel és különböző látásmódunkkal nem csak egymást, de tereinket is építhetjük.”

108 „A játékosok összetétele azonban rendkívül izgalmas volt, sok új dolgot hozott felszínre, amire nem is gondol a mindennapi ember!”

- **Step 2: Opinion Clash in Teams** required internal consensus. Divergent perspectives were filtered out early, preventing certain knowledge stocks from entering the collective discussion.
- **Step 3: Opinion Clash in Delegates' Forum and For All** reintroduced some diversity, as delegates responded individually to questions. Yet the gesture-based format limited depth, leaving biographical or expert insights largely implicit.
- **Step 4: Defense Speech & Free Debate** proved decisive. In *Street Parliament*, loosened rules allowed differentiated knowledge stocks to re-emerge and circulate. Facilitators observed: "Once the rules were clarified, there was little need to moderate the debates. A wide range of perspectives emerged, and the game unfolded in a constructive manner"¹⁰⁹ (T11_20150531). Here, generational and locational differences became visible: "[...], which allowed us to observe how different age groups argue at varying levels of depth: younger children tended to reason along social and solidaristic lines, while older ones adopted more economic and objective perspectives."¹¹⁰ (kultúrAktív Egyesület, 2015, August 28); and "I really appreciated the diversity of arguments and reactions stemming from different contexts—for instance, the contrast between perspectives from the capital and the metropolitan periphery, or between social and economic reasoning."¹¹¹ (T6_20150517). Unlike the more controlled *Rule-book Parliament*, *Street Parliament* enabled spontaneous, multi-layered exchanges in which contrasting understandings were expressed and occasionally renegotiated: "It was encouraging to see that all it took was asking a question, and urban actors were happy to share their views with one another through the game."¹¹² (kultúrAktív Egyesület, 2015, August 28). A striking example came from a wheelchair user during a debate on dog-waste penalties: "[...] this is a major issue for wheelchair users: their hands get dirty, they are exposed to numerous infections, it's uncomfortable, and they have to concentrate on both wheels at the same time."¹¹³ (T7_20150517). Such embodied experiences expanded the collective understanding of urban challenges.
- **Step 5: Voting** compressed these diverse exchanges into binary outcomes, offering closure but simplifying the richness accumulated during **Step 4**.

109 „A szabályok tisztázása után a vitákat irányítani nem volt igazán szükséges, rengeteg szempont előkerült, konstruktív játék volt”

110 „[...] megismerkedhettünk a korosztályok különböző mélységű érveléseivel: a kisebbek társadalmi vonalon, szolidárisan, a nagyobbak inkább gazdasági szempontból, tárgyilagosan érveltek.”

111 „Nagyon tetszettek a különböző kontextusból érkező reakciók és érvek: pl. fővárosi és agglomerációs érvek közötti különbség, társadalmi és gazdasági érvek.”

112 „Jó volt látni, hogy csak kérdezni kell, és a különböző városi szereplők szívesen osszák meg véleményüket egymással a játékban.”

113 „a kerekesszékeseknél ez nagyon nagy probléma, mert összekénik a kezüket vele, rengeteg fertőzést kapnak el, kényelmetlenség, és két kerékre kell figyelniük [egyszerre].”

In sum, *Parliament* demonstrated that knowledge stocks are not automatically expressed but are actively mediated by the game's communicative structure. Early phases filtered divergence; mid-game debates reopened space for biographical, professional, and embodied perspectives; and the final voting stabilized shared outcomes, albeit at the cost of reducing complexity. This structural progression turned social diversity into a resource for collective meaning-making.

7.6 Communicative Action Theory Analysis

This section analyzes the *Parliament* prototype through the theory of communicative action, examining how its design and facilitation supported or constrained equality, reason-giving, and consensus. Developed in response to the limitations of *Clash*, *Parliament* introduced structured deliberation, rotating roles, and active facilitation to approximate rational discourse.

The analysis follows the three analytical dimensions outlined in Section 4.4.2.3: equitable participation (7.6.1), reason-giving procedures (7.6.2), and coherence and depth of agreement (7.6.3).

7.6.1 Equitable Participation

Habermas's ideal speech situation presupposes a communicative environment free from coercion and hierarchy, where participants influence outcomes through the strength of arguments rather than power or status. *Parliament* came closest among the prototypes to realizing these conditions, though degrees of equality varied across its three versions—*Rulebook*, *Indoor*, and *Street Parliament*.

7.6.1.1 Game Design

The game's structure combined sequential phases of team formation, expression, debate, and collective decision-making, each shaping participation differently:

- **Step 1: Teaming Up:** Players formed small teams (→ see **Group Division, Partner Selection**).
- **Step 2: Opinion Clash in Teams:** All team members expressed yes/no stances simultaneously (→ see **Communication Rules, Interaction Choice**). This structure prevented dominance among team members and ensured inclusion across ages and confidence levels (→ see **Player Age**).
- **Step 3: Opinion Clash in Delegates' Forum & For All:** Hierarchy appeared in the *Rulebook* and *Indoor* versions when each team nominated a delegate to speak in a central circle while others stood behind (→ see **Space Layout, Player Visibility**). *Street Parliament* dissolved this division: all participants joined the *opinion clash* directly, representing their own views in an open circle that promoted equality (→ see **Space Layout, Player Visibility**).
- **Step 4: Defense Speech & Free Debate:** Marked the sharpest divergence in equality. In *Rulebook Parliament*, only one delegate spoke; *Indoor Parliament* allowed short comments after the defense speech; *Street*

Parliament opened full discussion. Even there, spatial asymmetries—audibility, height, proximity—and interpersonal relations such as familiarity or authority affected the influence of arguments (→ see **Physical Characteristics, Player Relationships**).

- **Step 5: Voting:** Restored formal equality, giving everyone identical procedural roles (→ see **Communication Rules, Symbolism in Gameplay**).

7.6.1.2 Facilitation

Facilitators were central to maintaining equality (see T6–T11). They continuously adjusted spatial arrangements to preserve audibility and visibility (→ see **Preparing the Communication Setting, Game Context, Ambient Conditions**), encouraged hesitant speakers, moderated dominant ones, and tailored interventions to players' communicative capacities (→ see **Facilitating Discussion and Debate, Adapting to Player Needs**).

They also navigated implicit hierarchies. Within family or colleague groups, familiar power dynamics reappeared (→ see **Player Diversity, Player Relationships**), while among strangers, physical differences such as age or height shaped visibility and perceived authority (→ see **Player Age, Physical Characteristics**).

At times, facilitators themselves influenced equality. When they joined debates, their contributions carried greater weight due to their perceived authority, unintentionally signaling that their views mattered more than those of other participants (T8_20150517).

7.6.2 Reason-Giving Procedures

This dimension examines whether **Parliament** supported rational argumentation—whether participants could justify claims, respond to critique, and engage in testing validity claims of truth, normative rightness, and sincerity.

7.6.2.1 Procedural Framework and Communication Patterns

Communication unfolded through structured exchanges that evolved across the three versions—**Rulebook**, **Indoor**, and **Street Parliament**. Each retained the *opinion clash* pattern (→ see **Ritualized Expressions**) from **Clash**, while adding a new reasoning phase in **Step 4**:

- **Step 2: Opinion Clash in Teams:** Players expressed yes/no stances within teams, enabling equal expression but no reasoning.
- **Step 3: Opinion Clash in Delegates' Forum & For All:** Team delegates voiced positions to the plenary while others observed; in **Street Parliament**, all expressed their stance directly.
- **Step 4: Defense Speech & Free Debate:** Added distinct moments of reasoning.
 - **Rulebook Parliament:** Justification was confined to a one-minute *defense speech* by the questioning team—a monologue mirroring persuasion rather than dialogue.

- **Indoor Parliament:** Informal questioning followed defense speeches, initiating brief *dialogic turns*.
- **Street Parliament:** The defense speech lost formality; facilitators opened the floor for group discussion. Any participant could respond, creating a multi-voiced exchange.
- **Step 5: Voting:** Concluded the round, transforming argument into collective decision through a modified *opinion clash* pattern.

These shifts gradually turned *opinion clash* from ritualized display into deliberative interaction.

7.6.2.2 Rational Argumentation and Engagement with Validity Claims

Rational argumentation appeared most clearly in **Step 4**, where verbal reasoning replaced ritualized gesture. In **Street Parliament**, participants could respond directly and collectively test claims of truth, rightness, and sincerity.

A typical sequence unfolded during a discussion on urban waste: *Are there enough trash bins on the streets?* (kultúrAktív Egyesület, 2015, August 28). A parent appealed to factual truth, noting the amount of litter on the street; a child countered with civic responsibility, appealing to normative rightness. Both spoke sincerely, drawing on lived experience. The exchange enacted all three validity dimensions in miniature. During the debate, players asked themselves: “What kind of urban environment do we live in? Who is responsible for picking up trash? What kind of waste do we place in the bin? Is spitting sunflower seeds on the ground considered littering? Would you place trash bins differently in a street than in a park? What about downtown versus the suburbs? Selective or mixed waste?”¹¹⁴ (kultúrAktív Egyesület, 2015, August 28), illustrating how **Parliament** allowed participants to move from simple opinions toward reflective argumentation.

The landscape pulses or the yes-or-no questions shaped the argumentation process (→ see **Landscape Pulse**). Two aspects proved decisive for how reasoning unfolded and which validity claims—truth, normative rightness, or sincerity—could be activated:

- **Presentation:** Clear, concrete phrasing enabled players to identify the claim at stake.
- **Familiarity:** Everyday relevance to players’ lifeworlds supported authentic reasoning and moral reflection (→ see **Group Diversity**, **Player Age**, **Player Affiliation**).

Thus, **Parliament** demonstrated that argumentation depends on how well topics bridge personal experience and collective reflection.

114 „Milyen városi környezetben élünk? Kinek a feladata a szemétszedés? Milyen szemetet helyezünk el a szemetesben? Szemetelés-e a szotyizás? Máshogy helyezed el a szemeteseket az utcán, mint a parkban? Belváros-külváros? Szelektív vagy ömlesztett?”

7.6.2.3 Facilitation and Support for Rational Argumentation

Facilitators shaped both physical and procedural environments. They arranged settings to optimize audibility, proximity, and visibility (→ see **Preparing the Communication Setting, Ambient Conditions, Player Audibility, Player Proximity, Player Visibility, Game Context, Space Layout**) and adjusted rules to maintain balance between order and openness (→ see **Enforcing Game Rules**). During **Step 4**, their role shifted from enforcing rhythm to enabling dialogue—inviting diverse voices and reframing points (→ see **Facilitating Discussion and Debate, Encouraging Diverse Perspectives**).

Adapting to heterogeneous groups required sensitivity: older players needed time, while children hesitated before adults (→ see **Adapting to Player Needs, Player Age, Player Diversity**). Diverse groups enriched debate through new perspectives, while homogeneous ones demanded targeted prompts to stimulate reflection (→ see **Landscape Experience, Player Age, Player Residency, Player Affiliation**). Facilitators balanced these asymmetries by inviting quieter players, reframing arguments, or using symbolic cues to sustain engagement.

Through these interventions, facilitators actively contributed to realizing the procedural conditions for rational argumentation: equality of voice, mutual listening, and reflective justification.

7.6.3 Coherence and Depth of Agreement

Agreement in **Parliament** occurred through two main decision points—**Step 3** and **Step 5**—each corresponding to different depths of consensus.

7.6.3.1 Depth of Agreement

In **Step 3: Opinion Clash in Delegates' Forum & For All**, matching gestures led directly to **Final Step: Constructing with Consensus**. This mirrored **Clash**: consensus appeared as synchronized performance rather than discursive understanding. Agreement here represented *Übereinstimmung*—alignment without justification—or *Gleichgestimmtheit*, emotional harmony.

When disagreement arose, **Step 4: Defense Speech & Free Debate** introduced reasoning—defense speech in **Rulebook Parliament**, open debate in **Indoor** and **Street Parliament**. **Step 5: Voting** followed as closure, using a modified *opinion clash* pattern—yes/no on the count of three among all participants—which now carried the weight of a collective decision about the landscape issue in hand (→ see **Symbolism in Gameplay**). In **Rulebook Parliament**, votes confirmed initial stances (*Einigung*—procedural agreement); in **Indoor** and **Street Parliament**, reflective choice emerged as some participants reconsidered positions (*Verständigung*—mutual understanding). Yet majority voting, as Habermas notes, “records, so to speak, the interim result of a discursive opinion-forming process” (Habermas, 1996, p. 179), closing debate but leaving some validity claims unresolved.

In rare cases, *Einverständnis*—value-based consensus—emerged, as during the Szabadság Square session: “We experienced how our views could be

harmonized through dialogue, and how our opinions and diverse perspectives not only shape one another, but also contribute to shaping our shared spaces.”¹¹⁵ (kultúrAktív Egyesület, 2015, August 28). The **Street Parliament** prototype—with its open layout and smaller groups—enabled players to focus on rational argumentation and distance themselves from team loyalty, *debating* and *voting* according to conviction.

7.6.3.2 Game Design and Facilitation for Agreement

Design and facilitation shaped the range of agreement. The scoring system rewarded swift or majority outcomes (→ see **Scoring System**), emphasizing closure over reflection. The **Rulebook** version linked points to persuasive success; **Indoor** and **Street** versions valued dialogue but treated *voting* as symbolic completion (→ see **Symbolism in Gameplay, Player Engagement**).

Facilitators mediated between efficiency and reflection, prompting justification, rephrasing arguments, and encouraging quieter voices (→ see **Facilitating Discussion and Debate, Encouraging Diverse Perspectives**). When time pressure dominated, agreement again became procedural rather than reflective.

Overall, **Parliament**’s game design and facilitation together created a communication environment that supported procedural agreement—majority voting rather than consensus in the Habermasian sense—by combining two communicative modes: **Clash**’s rapid concurrence and moments of reasoned understanding. It reached *Verständigung* intermittently and *Einverständnis* only in ideal settings.

115 „Megtapasztaltuk, hogy nézeteink a párbeszéden keresztül harmonizálhatóak, és hogy véleményünkkel és különböző látásmódunkkal nem csak egymást, de tereinket is építhetjük.”

8

Small-Group Communication in *Tactic Dice*

Developed in mid-2015 during Phase III of the *Urbanity* project, *Tactic Dice* expanded earlier game structures by introducing risk, tactical betting, and dice-based unpredictability. Contrasting with *Parliament*'s structured deliberation and *Clash*'s rhythmic encounters, it explored how chance and competition influence communication quality, persuasion strategies, and group cohesion.

The chapter reconstructs the prototype's development (Section 8.1) and gameplay structure (Section 8.2), followed by a visual analysis of communication patterns (Section 8.3), a thematic analysis of influential design and facilitation factors (Section 8.4), and theoretical reflection through social constructivist landscape theory (Section 8.5) and communicative action theory (Section 8.6).

8.1 Prototype Development and Testing

Tactic Dice emerged after the *OFF-Biennale Budapest* under the slogan "Let's polish the game to perfection!"¹¹⁶ (E_20150715). The design team sought to expand *Urbanity*'s mechanics by introducing strategic uncertainty and risk (E_20150715; E_20150729): "[...] there should be a risk factor—I call this an obstacle, danger, or antagonist. It should be introduced randomly into the gameplay."¹¹⁷ (E_20150729). This idea evolved into the stake-placing mechanic: "the element of danger [...] appeared in the requirement that the team had to stake something when issuing a challenge related to a given question."¹¹⁸ (E_20150729). It led to the introduction of betting, duel-style questioning, and dice-based randomness during two design workshops (M12–M13). These innovations layered tactical decision-making and chance elements onto the dialogic foundations of earlier prototypes (Table 8.1).

The result was a more complex interaction logic, where deliberation was sometimes overridden by risk, probability, and strategic play. The prototype was tested in one organized session (T15) with 7–15 adult volunteers from the *Járókelők* association (Table 8.2). Observations and post-game reflections informed refinements in scoring logic and debate flow.

116 „Csiszoljuk tökéletesre a játékot!”

117 „[...] kéne valami kockázati tényező – ezt nevezem akadálnak, veszélynek, gonosznak. Ennek véletlenszerűen kéne beiktatódnia”

118 „a veszély [...] megjelent abban, hogy a csapatnak kihíváskor tétet kell raknia az adott kérdéshez.”

Table 8.1 *Tactic Dice*: Game development workshops. Table by the author.

Workshop Nr.	Brief description of the event
M12_20150730 (Phase III)	Enhancement brainstorming. Betting mechanics were introduced, allowing players to duel and wager construction points. Visual scoring improvements were proposed.
M13_20150806 (Phase III)	Refined rules and question cards. Added dice mechanism to introduce unpredictability. Players selected themes. Feedback survey prepared.

Table 8.2 *Tactic Dice*: Play tests. Table by the author.

Gameplay Nr.	Brief description of the event	Player Nr.	Age of Players	Place played
T15_20150813	Team-building with Járókelők association: organized session with volunteers	7-15	Adults	Indoor

8.2 Game Concept and Rules

Tactic Dice retains the spatial setup and symbolic structure of *Parliament* while introducing strategic randomness into gameplay. The six-step communication framework remains intact but is extended through mechanics such as betting, dice rolls, and duel-style interactions. These elements reconfigure the rhythm of small-group communication by using chance as a tactical device—shifting the focus from structured deliberation toward probabilistic negotiation.

8.2.1 Game Setup

The play area centers on the familiar abstract city board with six magnetic buildings, each representing one thematic discussion topic: *livable city*, *renewing city*, *caring city*, *smart city*, *sustainable city*, and *self-organizing city*.

Players form two to four teams, choose thematic categories, and position themselves around their selected buildings. Each team receives 16 yes-or-no question cards and 16 magnetic construction points related to their theme.

A six-sided die governs scoring outcomes—ranging from full point gains to null results—introducing an element of chance into the opinion-exchange process.

8.2.2 Goal of the Game

Teams aim to earn as many construction points as possible through consensus with other players on landscape issues. They use strategic wagering and tactical opponent selection to secure immediate scores during *opinion duels*. When consensus fails, dice-based outcomes determine whether construction can still

proceed. The team with the highest total of construction points at the end of the session wins.

8.2.3 Communication Steps

The gameplay of **Tactic Dice** follows seven main communication steps, combining argumentation, tactical decision-making, and elements of randomness.

- **Step 1: Teaming Up:** Players form teams of two to three, choose a thematic focus, and take positions behind the corresponding magnetic building.
- **Step 2: Opinion Clash in Teams:** Within each team, players identify a consensus question by simultaneously signaling their stance—raising a hand for “yes,” keeping it down for “no”—on a count of three.
- **Step 3: Opinion Clash of Duelists:** The questioning team wagers 1–4 construction points and selects an equal number of duelists from other teams. After posing the question, all duelists respond simultaneously.
- If all agree → proceed to **Final Step: Constructing with Tactic**, then return to **Step 3**.
- If not → proceed to **Step 4**.
- **Step 4: Open Debate:** All players are invited to discuss the issue freely in preparation for the dice round, where arguments may influence collective expectations.
- **Step 5: Dice Round with Opinion Clash:** The die is rolled to determine the outcome:
 - 6: The questioning team’s stance wins → full reward → **Final Step: Constructing with Chance**, then return to **Step 3**.
 - 5: The team’s stance loses → no reward → return to **Step 3**.
 - 1–4: A new *opinion duel* is initiated with a different team.
 - Majority supports questioning team → half reward → **Final Step: Constructing with Chance**, then return to **Step 3**.
 - Minority supports → no reward → return to **Step 3**.
 - Tie → proceed to **Step 6**.
- **Step 6: Voting:** In case of a tie, all players vote after the question is re-read. The outcome determines scoring.
- **Final Step: Constructing with Voting:** If the questioning team’s stance gains a majority, they earn one construction point and place a building block on the city map. If not, no points are awarded. In both cases, gameplay resumes from **Step 3**.

The game concludes once all question cards have been used. While the team with the highest score wins, **Tactic Dice** foregrounds the interplay between rational argument, strategic risk, and randomness—highlighting how uncertainty can reshape deliberation and collaboration in participatory contexts.

8.3 Visual Analysis of the Small-Group Communication Process

Fig. 8.1 *Tactic Dice*: Visual analysis of the small-group communication process. Foldout diagram with legend (see pocket at the end of the volume). The legend applies to all diagrammatic detail views in Chapter 8. Graphic by the author.

This section analyzes how small-group communication unfolded in *Tactic Dice* through visual analysis, following the analytical framework introduced in Section 4.4.2.1. The communication structure outlined in Section 8.2 is synthesized in the overview shown in Fig. 8.1, which serves as the reference legend for the interpretation presented in this section.

The analysis examines how tactical uncertainty and dice-based randomness reconfigured small-group communication. The following subsections (Sections 8.3.1–8.3.4) address four analytical perspectives: temporal sequencing, spatial activation, landscape-related dialogue, and the role of facilitation within a game system shaped by risk and chance.

Together, these analyses explore how *Tactic Dice* shifted communication from structured deliberation toward probabilistic interaction and how this transformation affected dialogue, participation, and facilitator involvement.

Findings from this section provide the basis for the thematic analysis presented in Section 8.4 and contribute to the broader synthesis and the *Communication Pattern Analysis Method* presented in Chapter 11.

8.3.1 Temporal Structure: Steps, Snapshots, and Looping Rhythm

Gameplay unfolds through six communication steps (gray boxes), culminating in several possible **Final Steps** (black boxes).

Four looping sequences, marked by black arrows, all cycle back to **Step 3**, which serves as the structural anchor of the game:

- **Loop 1:** If duelists agree in **Step 3**, play proceeds to **Final Step A** and then loops back to Step 3.
- **Loop 2–3:** If disagreement occurs in **Step 3**, play continues to **Step 4: Open Debate**, followed by **Step 5: Dice Round with Opinion Clash**. Depending on the dice outcome, the process leads to **Final Steps B–C** (loop 2) or **Final Steps D** (loop 3) and then returns to **Step 3**.
- **Loop 4:** If **Step 5** ends in a tie, **Step 6: Voting** is triggered, leading to **Final Step E**, which again loops back to **Step 3**.

This looping architecture introduces tension and unpredictability, enriching the interactional dynamics but also increasing procedural complexity.

Step 2 includes an internal loop that allows repeated *opinion clashes* until a consensus question is selected.

Step 5 stands out as the most intricate phase, shown by its branching snapshot logic and multiple outcome pathways.

8.3.2 Communication Zones and Spatial Activation

Gameplay operates across five communication zones, each corresponding to distinct interaction types and levels of participation:

- **Core zone:** The central game board becomes active only during the **Final Steps**, symbolizing the resolution of prior exchanges.
- **Team zones:** Dashed gray circles activate in **Step 2**, when teams internally select thematic questions. Each zone is color-coded to mark team identity.
- **Duelist forum:** A central space where 1–4 players engage in tactical face-offs during **Step 3**. This mirrors **Parliament**'s delegate forum but replaces representation with competition.
- **Debate zone:** Activated during **Step 4** and **6**, this wider zone accommodates inclusive group *debate* and *collective voting*.
- **Cross-team zones:** Unique to **Step 5**, these emerge when the dice roll triggers new team-versus-team confrontations, introducing a spatial logic absent in earlier prototypes.

From **Step 2** onward, color-coded zones visualize which teams are active in each interaction, while dashed outlines indicate inactive groups or shifting alignments.

Spatial activation follows a rhythmic expansion and contraction: from team-level *opinion clashes* (**Step 2**) to *dualist* face-offs (**Step 3**), then to full-group *debate* (**Step 4**), narrowing again to team confrontations (**Step 5**), and re-expanding for *collective voting* (**Step 6**). While this choreography allows moments of inclusive engagement, the randomness of the dice in **Step 5** often disrupts deliberative continuity. As a result, full-group exchanges are brief and frequently overridden by chance-based outcomes.

8.3.3 Landscape Communication Patterns

Landscape questions recur throughout the game, consistently framed by the binary logic of the *opinion clash*: a pulse (white arrow) initiates a question, followed by simultaneous yes/no (Y/N) responses.

- The first occurs in **Step 2**, where teams internally select a stance.
- It repeats in **Step 3**, where duelists face off in direct confrontation.
- **Step 4** introduces the game's only open deliberative moment—a collective debate allowing players to articulate and reason through differing positions.
- However, **Step 5** immediately disrupts this reflective phase: the dice roll determines the next move, sometimes ending the round abruptly or redirecting it into a new clash. Depending on the dice outcome, gameplay may:
 - End instantly, granting victory or loss based solely on the questioning team's stance—overriding previous argumentation; or

- Trigger a new *opinion duel* between two teams, narrowing deliberation to a limited subgroup. If this secondary clash ends in a tie, **Step 6: Voting** reopens the floor to all players, offering a brief collective resolution before the next loop. This mechanic weakens the deliberative power of the game. The reliance on randomness often interrupts argument continuity, delays symbolic closure, and blurs the connection between dialogue and outcome.

Although landscape themes remain central, their exploration oscillates between moments of reasoned debate and abrupt, chance-driven conclusions.

8.3.4 Facilitator's Role

The facilitator's presence becomes more prominent due to the game's structural and procedural complexity. They are responsible for enforcing rules, guiding transitions, assigning duelists, overseeing wagers, and managing dice rolls.

Because the design lacks built-in mechanisms for moderation or reflective closure, players increasingly depend on the facilitator—not only for procedural clarity but also for interpretive synthesis at the end of rounds.

Thus, facilitation in *Tactic Dice* evolves from a purely technical role into one that subtly supports comprehension and meaning-making, providing coherence amid the game's unpredictability.

8.4 Thematic Analysis of Factors and Facilitation Tasks of the Game Design Archive

This section identifies the factors and facilitation tasks that shaped small-group communication in *Tactic Dice*. The analysis draws on workshop minutes, observations from the single test event (T15_20150813), email discussions, blog posts, radio interviews, and a structured player questionnaire (nine out of ten responses), following the analytical framework introduced in Section 4.4.2.2.

The questionnaire provided both quantitative and qualitative insights into player experience. Results were shared via email (E_20150815a) and circulated among the design team for preliminary discussion (E_20150729; E_20150806; E_20150815a), ensuring that player feedback was systematically evaluated and integrated into later iterations.

The questionnaire included:

- **Scale-based evaluations:** *How much did you enjoy the game? Was the gameplay understandable?*
- **Multiple-choice questions:** *What are your thoughts on the game's elements? What do you perceive as the game's objectives? Which statements do you agree with?*
- **Open-ended prompts:** *What changes would you suggest? What did you enjoy the most? Did you learn something new?*

The thematic analysis follows the communication steps represented in the visual overview shown in Fig. 8.1 (foldout diagram in the pocket at the end of the volume), which serves as the reference structure for interpreting interaction processes in this chapter. Each subsection pairs a short interaction summary with the step's influential factors and facilitation tasks (Sections 8.4.1–8.4.7).

Cross-cutting factors (Section 8.4.8) and facilitation practices (Section 8.4.9) conclude the analysis.

Findings from this section contribute to the *Game Design Catalogue* and *Facilitation Guide* (Chapter 10).

8.4.1 Step 1: Teaming Up

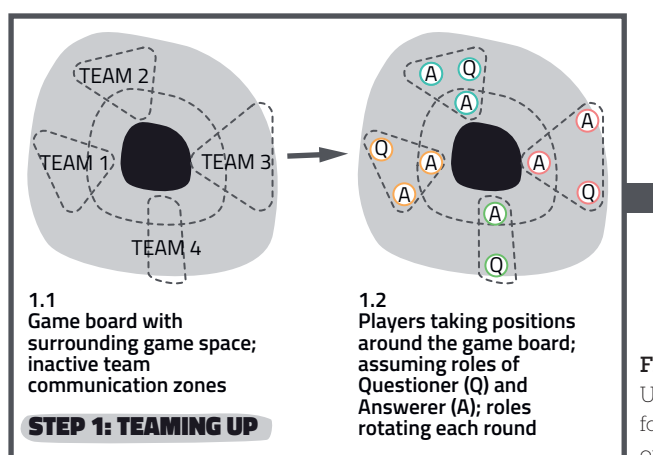


Fig. 8.2 *Tactic Dice*. Step 1: Teaming Up. Detail from Fig. 8.1 (see legend in foldout figure in the pocket at the end of the volume). Graphic by the author.

In **Step 1: Teaming Up** (Fig. 8.2), players form teams of two or three, select a thematic focus, and take their places in the game space.

Snapshot 1.1 shows the initial setup: six thematic buildings are pre-placed on the central black game board. Surrounding it are four active team zones (dashed grey outlines), indicating that four of the six topics are in play. These zones remain inactive for now but signal where players will gather. A fifth area—the duelist forum—is also marked and will activate later during *opinion duels*.

Snapshot 1.2 captures players standing behind their chosen building, color-coded by team. Each team receives a set of yes-or-no question cards based on their theme. Roles are also assigned: one player acts as the questioner, the others as answerers.

Although no landscape discussion occurs yet, this step establishes the foundations of interaction. Teams form around thematic anchors, distributing themselves evenly around the board and marking future communication zones. The spatial setup links each player to a theme and prepares the ground for structured exchanges in upcoming steps.

8.4.1.1 Player Relationships

Definition: Player relationships describe how degrees of familiarity—ranging from strangers to close peers—shape comfort, confidence, and communication in gameplay. Pre-existing ties influence not only who speaks and how openly, but also how group norms and hierarchies form during discussion. ↔ See also Sections 7.4.4.5, 8.4.1.1, and 10.1.3.5.

The single **Tactic Dice** test took place during a team-building event of the Járókelők group—active in urban issue reporting. Facilitators assumed all participants knew one another (T15_20150813). However, they later discovered that some were new to the group. This explained several observed dynamics: unfamiliar players were chosen less often for *opinion clashes* and struggled to anticipate teammates' views during tactical steps.

To address this, facilitators suggested brief pre-game interactions—similar to those in **Street Parliament**—to build familiarity and support more inclusive, confident engagement throughout the session (E_20150815a). Another recommendation was to have participants form teams with people they already knew: “Teams should consist of people who already know each other”¹¹⁹ (E_20150815a).

8.4.1.2 Space Layout

Definition: Space layout refers to the spatial organization of the play area, including the arrangement of players and game elements. The configuration of space shapes how participants move, who they can see and hear, and what forms of interaction are made possible—or restricted. ↔ See Sections 6.4.1.2, 7.4.3.1, 8.4.1.2, and 10.1.2.3.

Although the **Tactic Dice** setup mirrored **Parliament**—using the same six thematic buildings placed on a colorful abstract city map—a distinct spatial organization emerged. Players intuitively repurposed the four edges of the game board as zones for selected duelists. Since only four teams could play at once, each occupied a corner, and these corners became informal role markers during **Step 3: Opinion Clash of Duelists**, visually distinguishing duelists from bystanders and their tasks: “We used the play area so that the players asking questions would stand at its corner. I believe this is a good practice, as it visually distinguishes the questioning and responding players from the others, making it clearer who is responsible for what at any given moment.”¹²⁰ (T15_20150813).

Additionally, the arrangement of buildings on the map unintentionally created an enclosed central space. This inner arena shaped behavior in **Step 5: Dice Round with Opinion Clash**, as players instinctively began rolling the die between the buildings—perceiving the area as a natural dice zone. However, this practice disrupted the setup by knocking over buildings, prompting later design

119 „A csapatok egymást ismerő emberekből álljanak.”

120 „A játékkeret arra használtuk, hogy a kérdező játékosok annak sarkára álljanak. Szerintem ez azért lenne jó gyakorlat, mert a kérdező és a válaszoló játékosok kiemelődnek a többiek közül vizuálisan is, amiktől megint jobban átlátható, hogy kinek éppen mi a dolga.”

revisions: “At first, the die was thrown between the buildings, but I thought it would be better to roll it outside them to avoid knocking over any of the structures.”¹²¹ (T15_20150813).

8.4.2 Step 2: Opinion Clash in Teams

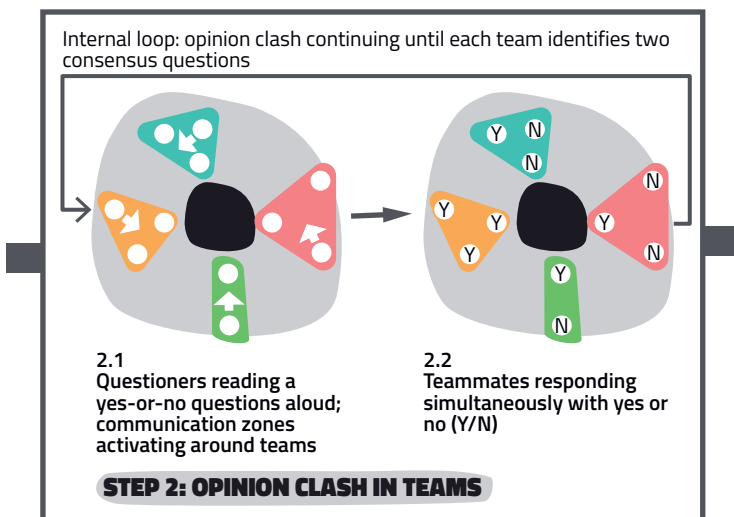


Fig. 8.3 *Tactic Dice*: Step 2: Opinion Clash in Teams. Detail from Fig. 8.1. Graphic by the author.

n **Step 2: Opinion Clash in Teams** (Fig. 8.3), players begin their first structured communication within team clusters. Each team selects two or three yes-or-no landscape questions from their thematic set to carry into later *opinion duels*, using the *opinion clash* method.

Snapshot 2.1 shows a designated team member reading a potential question aloud, broadcasting a pulse that activates the team’s communication zone (previously marked by grey dashed outlines). Team members prepare to respond.

Snapshot 2.2 captures the synchronized stance-taking: on the count of three, players express their position—raising a hand for “yes” (Y) or squatting for “no” (N). Only unanimously agreed-upon questions move forward. Teams repeat the process until they reach consensus on two or three questions (indicated by the grey looping arrow).

At this stage, communication remains confined within teams, producing binary internal agreements. During the single test event, however, facilitators had not fully introduced the *opinion clash* procedure (T15_20150813). This omission reduced clarity and altered the intended rhythm of interaction, as later discussed in Section 8.4.2.1.

121 „A dobókockát először a házak közé dobták, de jobbnak láttam, ha inkább azokon kívül dobjanak, nehogy a dobókocka feldöntse az épületet.”

8.4.2.1 Ritualized Expression

Definition: Ritualized expressions are game-specific, repeated gestures or cues—such as simultaneous hand raises or movements—that carry shared meaning. These actions form a symbolic language that streamlines communication and reinforces group cohesion. ↔ See Sections 6.4.3.3, 8.4.2.1, and 10.1.1.4.

The *opinion clash* method—developed in *Clash* and adapted in *Parliament*—operated as a ritualized expression: players counted to three and simultaneously signaled their stance by raising a hand for “yes” or squatting for “no.” This gesture-based mechanic established a shared rhythm and visual clarity during group decision-making.

During the *Tactic Dice* test, however, this ritual was not introduced. As facilitators later reflected, its absence disrupted the flow, left players uncertain of their roles, and reduced clarity during internal team debates: “However, they lacked a method for how to actually engage in [opinion clash], and they hadn’t practiced the yes–no answering format either. I believe this is important because, once it becomes routine, it helps players understand their role—which, in turn, makes the game run more smoothly.”¹²² (T15_20150813).

The reflection highlights how both the presence and absence of ritualized expression can significantly affect communication—structuring rhythm, confidence, and group coordination.

8.4.3 Step 3: Opinion Clash of Duelists

In **Step 3: Opinion Clash of Duelists** (Fig. 8.4), interaction shifts from internal team decisions to cross-team confrontation. The step introduces tactical communication, as players balance persuasion, strategy, and risk.

Snapshot 3.1 shows the initiating move: the questioning team declares how many points to wager and selects the same number of duelists from other teams (e.g., the yellow team chooses four duelists). Duelists are marked with D.

Snapshot 3.2 captures the verbal initiation: the yellow team delegate reads the prepared question aloud, broadcasting a pulse that activates the *opinion duel*. On the count of three, all duelists respond simultaneously—raising a hand for “yes” (Y) or squatting for “no” (N).

Snapshot 3.3-A depicts agreement: all duelists give the same answer, and the questioning team wins the wagered points, returning to **Step 3** for another round.

Snapshot 3.3-B depicts disagreement: at least one duelist offers a differing answer, triggering **Step 4: Open Debate**.

Across rounds, players often selected duelists they expected to agree with their stance, favoring tactical efficiency over diversity of opinion and postponing broader engagement until later stages.

122 „Így viszont nem volt módszerük arra, hogy ezt [a véleményütköztetést] hogyan tegyék, plusz nem gyakorolták az igen-nem felelet módját, ami szerintem azért fontos, mert ha rutinszerűen megy, akkor az segít abban, hogy tudják, mi a dolguk, amitől pörgősebben megy a játék.”

Loop 4: Returning to Step 3 after Final Step E

Loop 3: Returning to Step 3 after Final Step D

Loop 2: Returning to Step 3 after Final Step B or C

Loop 1: Returning to Step 3 after Final Step A

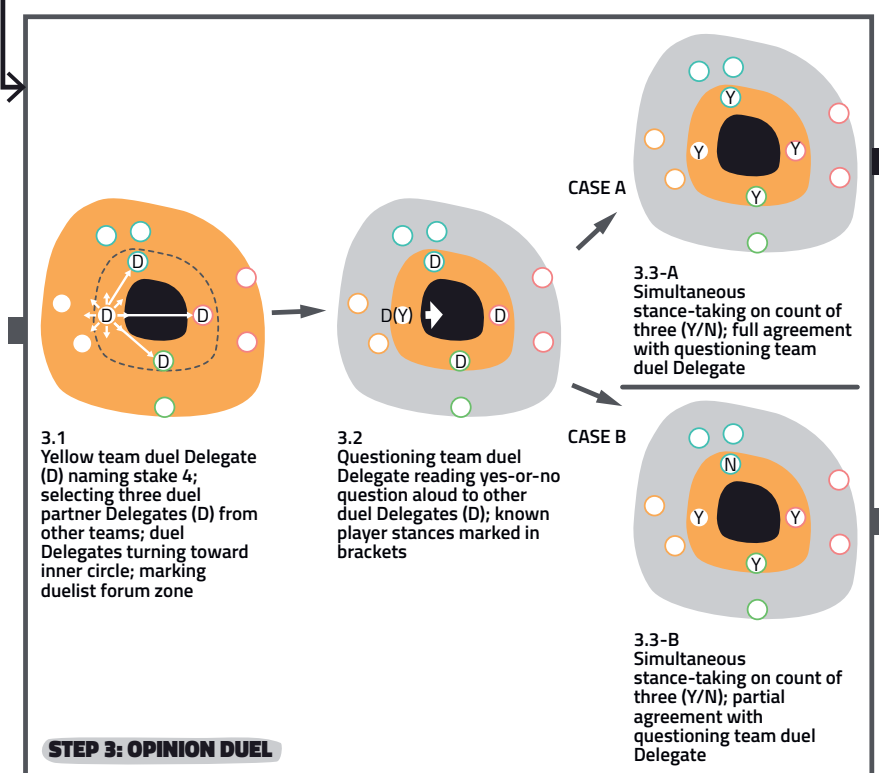


Fig. 8.4 *Tactic Dice*: Step 3: Opinion Clash of Duelists. Detail from Fig. 8.1. Graphic by the author.

8.4.3.1 NEW! Tactical Dynamics

Definition: Tactical dynamics refer to strategic behaviors shaped by game mechanics that influence how players interact and communicate. When players aim to optimize outcomes—by scoring, avoiding conflict, or accelerating play—these decisions affect group dialogue and the depth of engagement. ↔ See Sections 8.4.3.1, 9.4.2.1, and 10.1.1.13.

In *Tactic Dice*, tactical behavior dominated gameplay as players prioritized maximizing consensus through carefully selecting like-minded duelists. This dynamic emerged from several interconnected design elements:

- *Player-driven partner selection* granted full control over opponent choice (→ see **Partner Selection**).
- *Flexible group division* allowed players to determine both the number of duelists and their assignment to roles (→ see **Group Division**).

- A *consensus-based scoring system* rewarded alignment over deliberation, incentivizing agreement-seeking strategies (→ see **Scoring System**).
- A *risk-reward structure* tied to wagering heightened emotional involvement and attention (→ see **Player Engagement**).

These interlinked mechanisms encouraged tactical alignment and efficiency, shifting the communicative focus from deliberation to strategy. As a result, **Tactic Dice** became a negotiation of risk and reward more than a platform for open debate.

8.4.3.2 Player Engagement

Definition: Player engagement is the emotional and cognitive investment that draws participants into play. It grows through curiosity, anticipation, and the shared making of meaning—conditions that determine how actively and authentically players contribute to small-group communication. ↔ See Sections 6.4.2.1, 7.4.4.9, 7.4.6.2, 8.4.3.2, 9.4.3.2.1, and 10.1.3.8.

In **Tactic Dice**, different communication steps generated distinct forms of engagement, each shaping how players invested energy and attention in the game:

- **Step 3: Opinion Clash of Duelists:** Excitement arose from the tactical tension of risk-taking and wagering. Players “could develop a strategy”¹²³ (E_20150815a) to place bets, nominated like-minded duelists, and aimed to “seek consensus”¹²⁴ (E_20150815a) to secure points. The anticipation surrounding risk and outcome produced a concentrated, strategic type of engagement.
- **Step 4: Open Debate:** Excitement stemmed from verbal expression and debate. Though unstructured, this phase energized participants as they exchanged arguments and reacted to others’ opinions. Facilitators observed: “what I clearly read from this reflects exactly what we keep saying to each other: that asking questions, debating, reaching agreements, and arguing your point is enjoyable”¹²⁵ (E_20150815a). Players echoed this in post-game reflections (E_20150815a): “when we discussed our arguments”¹²⁶, “the questions, listening to each other’s views”¹²⁷, “we were able to hear many different perspectives”¹²⁸, “the debate+vote”¹²⁹, “education

123 „Lehetett stratégiát kialakítani”

124 „A konszenzus keresés”

125 „egyértelműen az olvasom ki, amiről mi is folyton beszélünk egymás között: hogy a kérdések, vita, a megengedezés, érvelés az élvezetes”

126 „amikor megvitattuk az érveinket”

127 „a kérdések, egymás véleményének meghallgatása”

128 „nagyon sokféle véleményt lehetett meghallgatni”

129 „a vita+szavazás”

towards civilized debate”¹³⁰. Survey responses confirmed strong affective involvement but limited perspective shift: six of nine players agreed “I understand other people’s perspectives better,”¹³¹ four of nine agreed “it was good to listen to others”¹³² or “what I heard made me reflect,”¹³³ one agreed “I was able to form my own opinion”¹³⁴ or “I heard something new,”¹³⁵ and none agreed “I changed my opinion”¹³⁶.

- **Final Step:** Joy came from tactile and aesthetic construction of the city. Players chose magnetic construction elements based on preference or symbolic value: “When placing the elements, some players made deliberate choices. For example, a girl who had shown consistent enthusiasm for the game selected the wind turbine because she loves it.”¹³⁷ (T15_20150813). However, facilitators noted that these choices remained intuitive rather than conceptual: “During the construction phase, they used the elements they liked, tossing them up completely at random—they did not aim to create a coherent picture.”¹³⁸ (E_20150815a).

Overall, **Tactic Dice** combined strategic, deliberative, and expressive modes of engagement. Players enjoyed from calculating risk, through debating viewpoints, to enacting outcomes materially—creating a rhythm that sustained attention even as motivations shifted.

8.4.3.3 Partner Selection

Definition: Partner selection is the method by which players are grouped for interaction—whether chosen by participants, assigned by rules, or randomized. This mechanism determines whose perspectives are exchanged and how interaction patterns emerge. ↔ See Sections 6.4.2.2, 7.4.2.1, 8.4.3.3, and 10.1.1.10.

In **Tactic Dice**, partner selection evolved dynamically across the communication sequence, shaping who interacted, under what conditions, and with what degree of choice:

- **Step 3: Opinion Clash of Duelists:** The questioning team had full autonomy in choosing opponents—selecting one to four duelists from other

130 „kulturált vitára való nevelés”

131 „jobban megértem mások véleményét”

132 „jó volt meghallgatni másokat”

133 „elgondolkoztattott, amit hallottam”

134 „ki tudtam alakítani saját véleményem”

135 „új dolgot hallottam”

136 „változtattam a saját véleményemen”

137 „az elemek felrakásánál volt, aki válogatott közülük. Itt pl. a játék iránt végig lelkesedést mutató lányka [...] kiválasztotta a szélerőművet, mert imádja.”

138 „Az építkezés során a számukra szimpatikus elemeket használták, teljesen random módon feldobva, nem volt céljuk, hogy egy egységes képet adjon.”

teams (→ see **Group Division**): “The duel was initiated on a personal basis—the challenger chose from which team and exactly whom they wanted to duel—that was good.”¹³⁹ (E_20150729). This structure enabled strategic targeting of like-minded players, reinforcing consensus-driven tactics (→ see **Tactical Dynamics**): “[...] after a few questions it became clear who had what kind of thinking on certain matters.”¹⁴⁰ (T15_20150813); and “After the first round they were already making tactical moves about how many people and whom to duel with.”¹⁴¹ (E_20150815a). Yet this freedom also produced imbalance—some players were repeatedly selected while others remained excluded: But it also led to imbalance—some players were repeatedly selected, while others were left out entirely: “There was a girl who, from the very beginning, was seldom invited out, which likely meant she got bored...”¹⁴² (T15_20150813).

- **Step 4: Open Debate:** Partner selection became universal. Any player could engage with any other, and everyone became a potential interlocutor. Interaction was fully autonomous: participants could join or step back at will (→ see **Interaction Choice**).
- **Step 5: Dice Round with Opinion Clash:** The dice roll introduced randomness. A result of 1–4 compelled a team into the next clash, while 5 or 6 bypassed interaction entirely. This eliminated all agency, making pairings purely the outcome of chance.
- **Step 6: Voting:** Partner selection returned to full inclusion—everyone participated simultaneously, and interaction was compulsory.

Across these stages, **Tactic Dice** alternated between autonomy, randomness, and compulsion. This fluid structure produced variety in interaction but also uneven participation, revealing how partner selection mechanisms shape fairness, visibility, and engagement in small-group communication.

8.4.3.4 Group Division

Definition: Group division is the structural arrangement of participants into one or more interaction units—fixed, random, or player-chosen—that shapes who interacts with whom, how often, and in what capacity. This design element guides the intensity, sequence, and equity of small-group communication. ↔ See Sections 6.4.1.1, 7.4.1.1, 8.4.3.4, 9.4.1.2, and 10.1.1.8.

In this step, the questioning team determined not only who to challenge (→ see **Partner Selection**) but also how *many*, dynamically shaping both group size and composition. Players were required to create two roles—duelists and

139 „A kihívást személy szerint végezzük, a kihívó kiválasztotta, h[ogy] melyik csapatból kívül akar játszani – ez jó volt”

140 „[...] pár kérdés után körvonalazódott, hogy kinek milyen gondolkodása bizonyos kérdésekben.”

141 „Az első kör után már taktikáztak, hány embert és kit hívnak ki.”

142 „Volt egy lány, akit viszont már az elejétől kezdve alig hívtak ki, amittől ő vsz. unatkozhatott...”

observers—yet they had full control over the number of participants in each group and who was assigned to which.

This player-driven division added tactical flexibility but also contributed to persistent exclusion patterns, reinforcing asymmetries in who got to participate and when.

8.4.4 Step 4: Open Debate

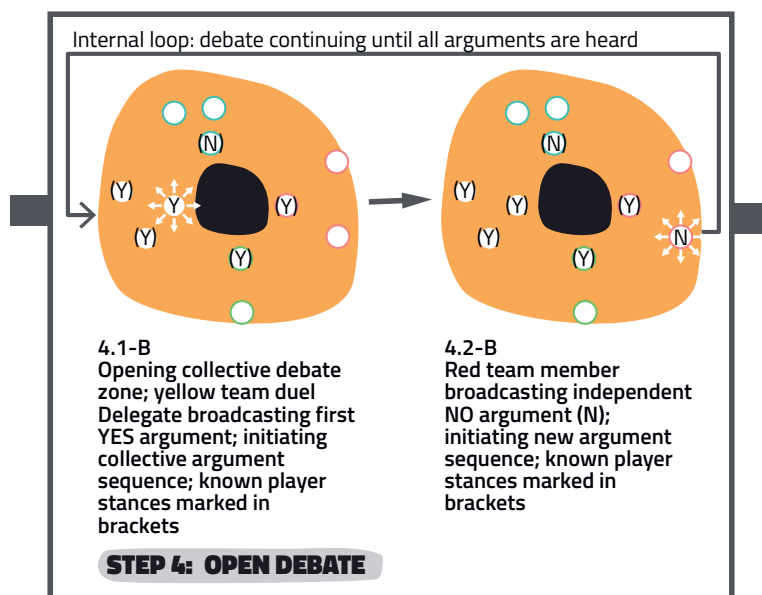


Fig. 8.5 *Tactic Dice*: Step 4: Open Debate. Detail from Fig. 8.1. Graphic by the author.

In **Step 4: Open Debate** (Fig. 8.5), the communication zone expands to encompass the entire game space, shifting interaction from the focused duel forum to an open arena. The previously localized exchange becomes collective, as all participants—regardless of prior role—are invited to speak.

Snapshot 4.1 shows a typical opening: a member of the questioning team delivers a *defense speech*, broadcasting a “yes” (Y) argument to persuade others and reinforce their stance. The duelists’ prior responses serve as reference points for the discussion.

Snapshot 4.2 depicts a counterargument, here voiced by members of the red team broadcasting a “no” (N). These contributions allow players previously excluded from the duel to enter the conversation, redistributing participation and broadening the argumentative field.

This step moves the prototype beyond binary yes/no responses, enabling players to articulate, justify, and contest viewpoints in a shared forum. However, the openness of this format also posed challenges: without clear facilitation or communication rules, debates often became unfocused and lost momentum.

8.4.4.1 Landscape Pulse (Communication Topic)

Definition: Landscape pulses—also referred to as communication topics—are short prompts (e.g., questions, statements, or scenarios) that introduce a theme for discussion and shape small-group interaction toward dialogue, problem-solving, or decision-making. ↔ See Sections 6.4.3.1, 7.4.4.3, 8.4.4.1, 9.4.3.1.1, 9.4.3.2.4, and 10.1.1.2.

Observations in *Tactic Dice* showed that three aspects of the landscape pulse—divisiveness, expertise level, and presentation—significantly shaped how discussion unfolded and how inclusive the debates became:

Divisiveness (how likely the pulse is to provoke disagreement or debate): **Step 4: Open Debate**, which marked the first time non-consensus questions were introduced into gameplay. The idea of mixing unifying and controversial prompts had circulated since the *Street Parliament* tests (T1_20150314; E_20150322a) and returned during final development: “[...] half consensus-prone, half divisive questions—it’s more exciting that way. [...]”¹⁴³ (E_20150729). One facilitator reflected: “Questions: I think this is the most interesting part of the game, and it entertains everyone—this is where the focus should be. [...] The questions could be much more provocative [...]”¹⁴⁴ (E_20150729). However, when consensus was not reached within teams, **Step 3** was bypassed entirely, and players moved directly into **Step 4**. This shortcut disrupted the designed sequence, effectively turning the game into an open discussion that required stronger moderation (→ see **Communication Rules**): “[...] if even the questioning team doesn’t agree, then the two-round version makes no sense—everyone should just vote immediately, and then we discuss the yeses and noes together. But in my view, that makes the game lose structure completely, turning it into a more open-ended discussion that requires heavy moderation.”¹⁴⁵ (T15_20150813). The lack of consensus also weakened team identity: “[...] I think it’s better if the first round includes questions on which there is agreement within the team, because that way they can feel like a team and represent their shared decision.”¹⁴⁶ (T15_20150813).

Expertise level (how well the question fits players’ prior knowledge) became apparent when urban-expert players found many standard questions overly simple: “I think this game only provides meaningful help to those at a very basic level of thinking about what makes a city livable. Maybe it would be worth

143 “[...] fele-fele arányban konszenzus-gyanúst, és megosztót, így izgalmasabb. [...]”

144 „Kérdések: sztem ez a játék igazán érdekes része, és ez szórakoztat mindenkit, erre kéne koncentrálni. [...] Lehetnének sokkal provokatívabbak kérdések is [...]”

145 “[...] ha a kérdező csapat sem ért egyet, akkor nincs értelme a kétkörös verziónak, és mindjárt mindenki szavazzon, majd együtt beszéljük meg az igeneket és a nemeket. Ettől viszont szerintem teljesen partalanná válik a játék, egy kötetlenebb beszélgetés alakul ki, amit erősen moderálni kell.”

146 “[...] azt gondolom, hogy jobb, ha az első körbe azok a kérdések kerülnek be, amikben egyetértés van az adott csapatban, mert így tudják magukat csapatnak érezni és képviselni a közös döntésüket.”

creating beginner/advanced question sets.”¹⁴⁷ (E_20150815a). To address this, participants proposed more complex and context-specific prompts, such as: *Do you agree with the construction plans in the City Park [Budapest's first public park]?¹⁴⁸ Do you think it's important that the international airport serving the capital receives adequate financial support from the state?¹⁴⁹ Do you find leaflet distributors annoying?¹⁵⁰ Is drawing with chalk considered a public sanitation offense?¹⁵¹* Facilitators agreed that the question set needed ongoing revision: “This is both the most defining and most changeable part of the game—it requires constant supervision and ongoing revision.”¹⁵² (E_20150815a).

Presentation (how clearly and simply the question is phrased) proved critical. Designers initially assumed that questions were self-explanatory, but first-time players struggled with overly long or abstract formulations: Designers initially assumed that questions were self-explanatory, but first-time players struggled with overly long or abstract formulations: “We already know all of them, but if the text is too long, it's harder to understand, and there are more follow-up questions. The extraneous information (which precedes many questions) should be kept to a minimum. The facilitator can add context if needed, but the card should contain at most half a page of readable, continuous text.”¹⁵³ (E_20150815a). As a result, questions were rewritten to prioritize clarity, brevity, and accessible language—lowering the entry threshold and ensuring that everyone could follow and contribute.

8.4.4.2 Communication Rules

Definition: Communication rules shape how, when, and by whom interaction happens during gameplay. These rules vary in strictness—from tightly regulated turns and formats to open, spontaneous exchanges—and influence who speaks, how long, in what order, and through which modes (verbal, non-verbal, or symbolic). ↔ See Sections 7.4.4.1 and 8.4.4.2, and 10.1.1.3.

In **Step 4: Open Debate**, no formal communication rules were applied. Facilitators described this as “[...] a more open-ended discussion that requires heavy

147 „Szerintem ez a játék csak azoknak nyújt komolyabb segítséget, akik nagyon kezdő szinten vannak az élhető várossal való gondolkodásban. Lehet, hogy érdemes lenne kezdő/ haladó kérdés-sorokat csinálni.”

148 „Egyetértesz azzal, hogy a Városligetet [Budapest első közparkja] beépítsék?”

149 „Fontosnak tartod-e, hogy a fővárosodat kiszolgáló nemzetközi reptér kellő anyagi támogatást kapjon az államtól?”

150 „Zavarnak a szórólapozó emberek?”

151 „A krétával rajzolás köztisztadási szabálysértése-e?”

152 „Ez a legmeghatározóbb és legképlékenyebb része is a játéknak, folyamatos kontroll kell hozzá, és folyamatos utángyártás.”

153 „Nekünk már ismerős mindegyik, de ha túl hosszú a szöveg, nehezen érthető és több a visszakérdezés, a mellékes infót (ami sok kérdést megelőz) minimálisra kell venni, esetleg a játékvezető kiegészíthető, ha szükséges, de egybefüggő felolvasható szöveg ne töltse ki a kártyát, max a felét.”

moderation.”¹⁵⁴ (T15_20150813). The absence of structure allowed spontaneous contributions but also led to uneven participation and declining focus: “at this point it clearly made no sense to play standing up—during a relatively extended debate they began to get bored, and more and more people sat down.”¹⁵⁵ (T15_20150813).

This revealed a core design tension. Consensus-based questions accelerated play but limited discussion—“It’s very easy to choose the consensus-questions; there was virtually no argument at all. Yet that’s exactly what’s interesting: immediate debate begins. The problem is, debate slows the game down. That’s a contradiction I don’t know how to resolve.”¹⁵⁶ (E_20150729).

These observations highlight that unstructured debate can broaden participation but risks losing momentum without clear scaffolding. The step demonstrated the need for flexible facilitation (→ see **Facilitating Discussion and Debate, Adapting to Player Needs, Encouraging Diverse Perspectives**) and adaptive communication rules. This step highlighted the need for stronger communication scaffolding to sustain meaningful engagement.

8.4.4.3 Communicative Roles

Definition: Communicative roles are the functional positions players assume during interaction—such as speaker, addressee, or observer—that guide how dialogue flows within small groups. These roles influence who contributes, who listens, and who reflects, shaping participation dynamics. ↔ See Sections 6.4.3.5, 7.4.1.2, 8.4.4.3 and 10.1.1.5.

In **Tactic Dice**, the observer role disappeared entirely in **Step 4: Open Debate**, as all participants were drawn into an active communication zone. Without structured turn-taking or rule-defined sequencing, players moved fluidly between speaking (speaker) and listening (addressee) depending on interest and momentary flow.

This openness fostered spontaneous contributions and collective energy: anyone could enter the discussion at any time. Yet the same freedom risked lengthy and uneven participation. Facilitators noted that ensuring balance required constant attentiveness and light moderation (→ see **Encouraging Diverse Perspectives**).

¹⁵⁴ „egy kötetlenebb beszélgetés [...], amit erősen moderálni kell”

¹⁵⁵ „itt már nagyon nem volt értelme állva játszani, egy relatíve hosszabbra nyúlt érvelésnél elkezdtek unatkozni, ill. egyre többen le is ültek.”

¹⁵⁶ „Nagyon könnyű kiválasztani a konszenzusos kérdéseket, gyakorlatilag alig volt érvelés. Pedig ez az érdekes, azonnal vita indul. Viszont a vita lassítja a játékot ez olyan ellentmondás, amit nem tudom, hogy oldunk fel.”

8.4.5 Step 5: Dice Round with Opinion Clash

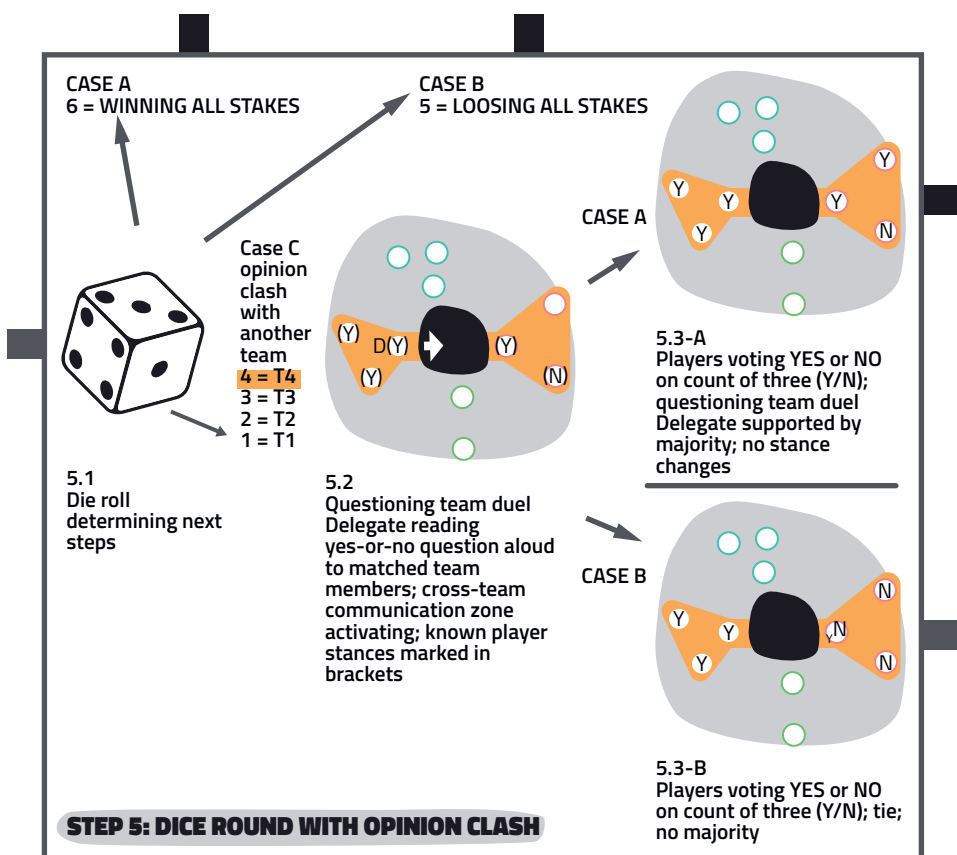


Fig. 8.6 **Tactic Dice**: Step 5: Dice Round with Opinion Clash. Detail from Fig. 8.1. Graphic by the author.

In **Step 5: Dice Round with Opinion Clash** (Fig. 8.6), the focus shifts from reasoned deliberation to chance. The questioning team rolls a die to determine the round's outcome—either ending the debate, granting points, or triggering a new *clash*.

Snapshot 5.1 outlines the three possible roll outcomes:

3. Rolling a 5 ends the round immediately; all wagered points are lost.
4. Rolling a 6 grants the questioning team full points and direct access to construction.
5. Rolling 1–4 calls another team into an *opinion clash*.

Snapshot 5.2 illustrates this escalation: a roll of 3 pairs the questioning team with Team 3 (red). Both teams signal their stances simultaneously—raising a hand for “yes” (Y) or squatting for “no” (N).

Snapshot 5.3 depicts two possible outcomes:

- **Case A, Snapshot 5.3-A:** A clear majority without opinion shifts earns half the wagered points, proceeding to **Final Step D**.

- **Case B, Snapshot 5.3-B):** No majority—often due to a yes-to-no change in opinion (yN)—leads to **Step 6: Voting**.

Facilitators responded positively to the added tension: “The dice worked well too.”¹⁵⁷ (E_20150815a). Some even suggested streamlining the game by removing the duel stage: “I think it’s worth considering using the die instead of the duel—after all, every round involved picking someone from each team anyway—so the die could decide following some kind of system (number of teams or a multiplier, this still needs some thought). The point is that it should be quick, and the focus should remain on the questions—they always enjoyed those”¹⁵⁸ (E_20150729).

Yet this element of randomness disrupted the deliberative rhythm established earlier. While the dice added excitement and unpredictability, it also replaced argument-based resolution with probability, introducing a tension between strategy, luck, and the game’s communicative goals.

8.4.5.1 Interaction Choice

Definition: Interaction choice refers to whether players have autonomy to engage in interactions. Games may offer moments of player choice or enforce participation through turn-taking or chance-based triggers. This design decision shapes agency, pacing, and the quality of small-group communication.

↔ See Sections 6.4.2.3, 8.4.5.1, 9.4.2.3, and 10.1.1.9.

Step 5: Dice Round with Opinion Clash introduced a fully non-autonomous, chance-based interaction: the die—not the players—determined whether a clash occurred and with whom (→ see **Partner Selection**). A roll of 1–4 compelled a team into an *opinion clash*; a 5 or 6 ended the round without interaction. This mechanism stripped agency from players, transforming engagement into an outcome of randomness rather than choice.

Across the six steps, interaction autonomy shifted in a patterned progression:

- **Step 2: Opinion Clash in Teams:** Mandatory participation; all players took part by rule.
- **Step 3: Opinion Clash of Duelists:** Partial autonomy; players could choose whom to challenge but not whether to respond.
- **Step 4: Open Debate:** Full autonomy; players decided whether to contribute.
- **Step 5: Dice Round with Opinion Clash:** Autonomy removed; dice dictated participation.
- **Step 6: Voting:** Mandatory participation; all players took part by rule.

This rhythm of shifting control—from rule-driven or chance-driven participation

¹⁵⁷ „A dobókocka is bevált.”

¹⁵⁸ „sztem meggondolandó, h[ogy] a kihívás helyett – úgyis minden körben minden csapattól hívtak – azonnal dobókocka legyen, és az döntsön valamilyen szisztéma szerint. (csapatszám, v szorzó, ezen is lehet még agyalni) lényeg h[ogy] gyors legyen és a kérdéseken legyen a hangsúly – azt mindig élvezték”

to full autonomy—reveals how interaction choice modulates group energy, fairness, and engagement across the flow of play.

8.4.6 Step 6: Voting

In **Step 6: Voting** (Fig. 8.7), the unresolved outcomes from previous *opinion clashes* culminate in a full-group decision. The communication zone widens once again to include all participants equally, restoring collective visibility and closure.

Snapshot 6.1 depicts the ritual: the yellow team duel delegate poses the yes-or-no question again.

Snapshot 6.2 show the results of the voting. On the count of three, all players simultaneously signal their stance—raising a hand for “yes” (Y) or squatting for “no” (N). This scales up the *opinion clash* gesture from smaller encounters to the entire group. The result determines whether the questioning team earns construction points in the **Final Step**:

- Majority support → The questioning team wins and proceeds to construction.
- Minority position → No construction is made.
- Tie → A new vote is held until a majority emerges.

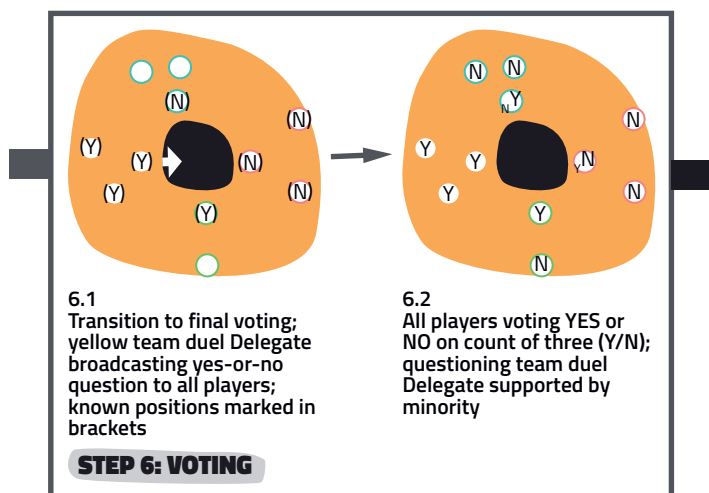


Fig. 8.7 **Tactic Dice**: Step 6: Voting. Detail from Fig. 8.1. Graphic by the author.

This step restores the balance between individual agency and collective decision-making. After the fluctuating control of earlier stages—strategic (**Step 3**), deliberative (**Step 4**), and chance-based (**Step 5**)—**Step 6** re-establishes equality. *Voting* thus functions as both procedural resolution and symbolic reconciliation, reaffirming shared participation before the game’s **Final Step: Constructing with Tactic, Chance & Voting**.

8.4.7 Final Step: Constructing with Tactic, Chance & Voting

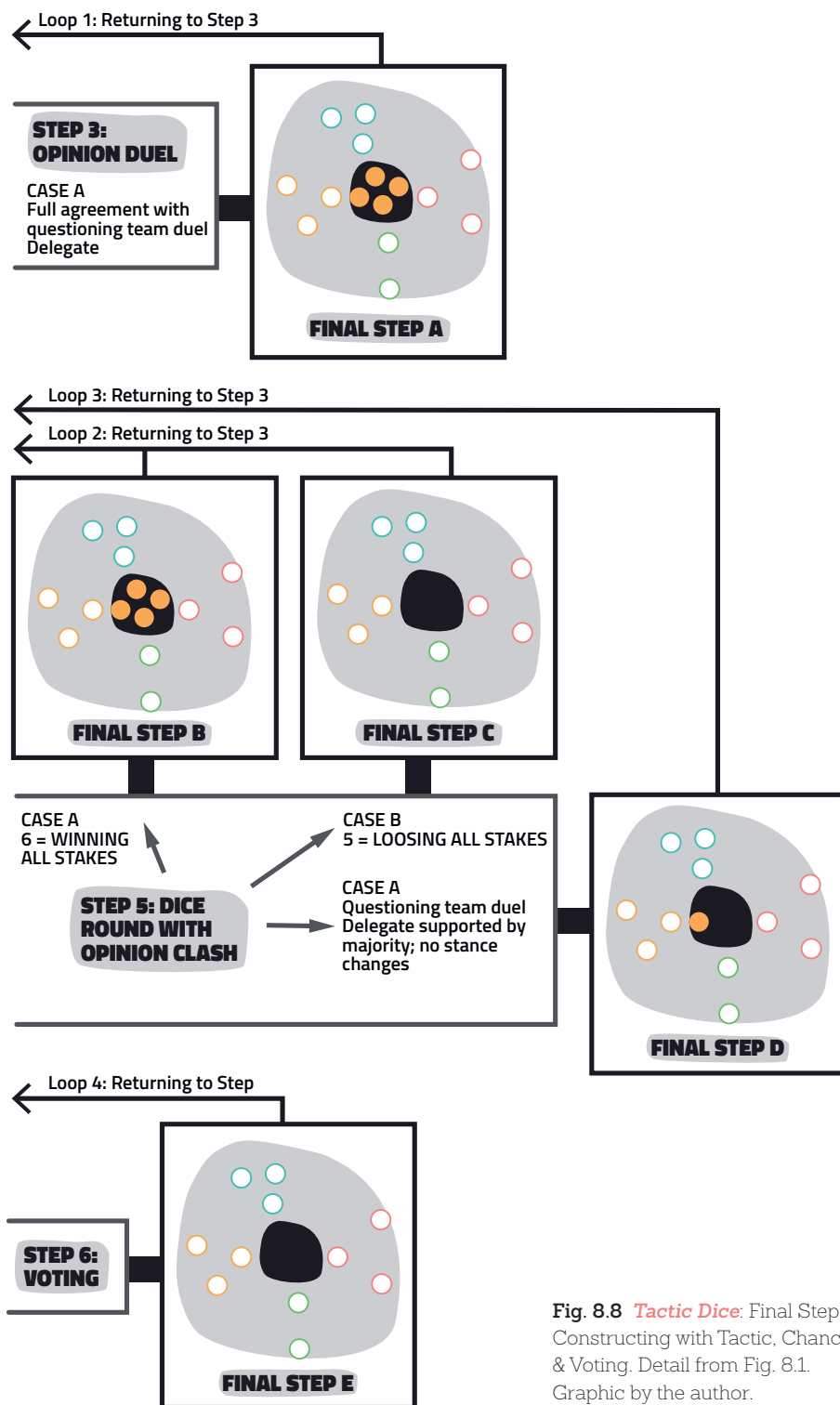


Fig. 8.8 *Tactic Dice*: Final Step: Constructing with Tactic, Chance & Voting. Detail from Fig. 8.1. Graphic by the author.

The **Final Step: Constructing with Tactic, Chance & Voting** translates earlier interactions—duels, debates, dice rolls, and votes—into tangible form on the shared game board. As verbal exchange fades, prior negotiations materialize as magnetic construction pieces, rendering earlier decisions visible and spatial.

Fig. 8.8 shows three distinct construction pathways:

- The first row illustrates **Final Step A: Constructing with Tactic**, stemming from **Step 3: Opinion Clash of Duelists**. Teams that reached full consensus during the *opinion duel* gained all wagered points and built immediately on their thematic building.
- The second row depicts **Final Steps B–D: Constructing with Chance**, following **Step 5: Dice Round with Opinion Clash**.
 - A roll of 6 granted all wagered points and direct construction (**Final Step B**).
 - A roll of 5 ended the round with no construction (**Final Step C**).
 - Rolls of 1–4 called a new team for an *opinion clash*. If the questioning team secured a majority, they constructed half the wagered points (**Final Step D**); otherwise, the round advanced to **Step 6: Voting**.
- The third row presents **Final Step E: Constructing with Voting**, originating from **Step 6**. Majority support led to construction; minority outcomes resulted in no building.

Across these pathways, construction acted as both closure and reflection—revealing how different decision logics translated into collective form. In **Tactic Dice**, agreement could emerge through strategy (**Final Step A**), chance (**Final Steps B–D**), or collective vote (**Final Step E**), each leaving a distinct physical imprint on the cityscape.

8.4.7.1 Scoring System

Definition: Scoring systems are the mechanics that reward player actions and track progress. They shape how participants perceive success and steer communication toward specific dynamics—such as competition, cooperation, or consensus—depending on how outcomes are incentivized. ↔ See Sections 6.4.4.1, 7.4.6.1, 8.4.7.1, 9.4.5.1, and 10.1.1.11.

The scoring system in **Tactic Dice** was designed to visualize the degree of agreement by translating communicative outcomes into construction results. Yet across its three resolution paths—tactic, chance, and voting—this intention proved difficult to sustain consistently.

- **Final Step A: Constructing with Tactic** (after **Step 3**): The system rewarded teams based on the number of duelists they challenged. Players quickly realized that higher wagers carried limited risk and greater potential gain, so most began to challenge the maximum number of opponents after the first round: “The duelist stood at the corner of the game board

and pointed at their selected opponents—one person from each team. Usually, they began with the maximum number of players allowed, though occasionally they hesitated to take the risk. But in truth, the stakes were low: choosing 3 meant the potential to win 4 points, while only risking 1 compared to what could be earned in two rounds (unless luck was against them, and they lost both).¹⁵⁹ (T15_20150813). Facilitators confirmed that this reduced strategic tension: “The gameplay still doesn’t really work; the ‘stakes’ have no actual weight.”¹⁶⁰ (E_20150729). Others noted the same issue more critically: “The game part still doesn’t really work; the stake doesn’t have any ‘stakes’”¹⁶¹ (E_20150729).

- **Final Steps B–D: Constructing with Chance** (after **Step 5**): Dice rolls often undermined the communicative purpose of scoring, since chance rather than dialogue decided whether construction occurred. A roll of 6 led to immediate building, 5 nullified the round, and 1–4 triggered a new decision round between two teams. This narrow framing also created frequent ties that required ad-hoc fixes: “We hadn’t accounted for the fact that if the numbers refer to teams, it’s very easy for the second round to end in a tie (3 yes, 3 no). That happened right at the beginning, and the solution, proposed by the players, was to hold a second vote where everyone voted.”¹⁶² (T15_20150813).
- **Final Step E: Constructing with Voting** (after **Step 6**): When prior methods failed, voting served as an inclusive fallback, restoring universal participation.

Despite these multiple routes, the visual outcomes tended to emphasize competition rather than cooperation. Team-colored houses reinforced separation—“So far I interpreted it as a city being built, but unfortunately the color-coded buildings don’t really communicate that clearly.”¹⁶³ (E_20150729)—and the overall design goal remained only partially realized: “In the previous version of gameplay, the aim was for the construction to reflect the level of agreement visually. That hasn’t really been achieved yet [...]”¹⁶⁴ (E_20150729).

159 „A kihívó felállt a játéktábla sarkára és rábökött a kiválasztottjaira, csapatonként 1-1 emberre. Általában a maximálisan kiválasztható számú játékoskal kezdtek, bár párszor előfordult, hogy nem merték ezt bevállalni. Igazából nem volt nagy tétje, mert ha 3-at választ 4-et nyerhet, de csak 1-t veszthet ahhoz képest, amennyit a 2 körben szerezhet (ill. ha nincs szerencséje, akkor azt a kettőt).”

160 „A licit is lényegében formális – mindenki mindig mindhárom csapatból kihív valakit.”

161 „Még mindig nem működik igazán a játék része, a tétnek nincs „tétje.””

162 „Itt azzal nem számoltunk, hogy ha a számok a csapatot jelölik, akkor viszont nagyon könnyen lesz döntetlen a 2. kör eredménye (3 igen, 3 nem). Ez mindjárt az elején meg is történt, amire az lett a megoldás, a játékosok javaslatára, hogy egy újabb szavazóköriben már mindenki szavazott.”

163 „eddig úgy értelmeztem, hogy egy város épül, csak ezt sajnos a házanként elkülönített színek nem közvetítik igazán jól.”

164 „A korábbi játékmenet esetében a cél, hogy az építkezés kifejezze, az elemek vizualizálják az egyetértés mértékét. Ezt eddig nem sikerül megoldani [...]”

Across these iterations, the scoring system highlighted a recurring tension in *Tactic Dice*: the more structured and calculable the reward logic became, the harder it was to preserve the symbolic and communicative meaning of shared construction: “It is not clear what the number of cards placed on the boards actually influences. Even determining a ‘winning’ team is questionable, since this is not a competition—as I understood it. The city that gets built is not evaluated; it appears more like a backdrop.”¹⁶⁵ (E_20150815a).

8.4.7.2 Symbolism in Gameplay

Definition: Symbolism in gameplay refers to the implicit messages embedded in a game’s terminology, mechanics, and visual cues. These symbolic elements shape how players interpret rules, roles, and outcomes—guiding communication toward competition, cooperation, or deliberation. ↔ See Sections 7.4.4.4, 7.4.5.1, 8.4.7.2, 9.4.2.4, 9.4.5.2, and 10.1.2.9.

In *Tactic Dice*, the scoring system (→ see *Scoring System*) carried symbolic meaning beyond its procedural function. Each resolution path not only distributed points but also conveyed messages about what counted as success, agreement, or collaboration. These implicit cues influenced how players understood the social logic of play.

Consensus as strength became evident in *Step 3*, where scoring rewarded unanimity and teams received full points only when all duelists agreed. This mechanic positioned alignment as both strategically advantageous and socially desirable. Players therefore sought like-minded partners and minimized confrontation, signaling that unity, rather than deliberation, was the preferred path to success.

Chance over deliberation emerged in *Step 5*, where resolution could suddenly shift from argument to probability. A roll of 6 granted automatic victory, 5 nullified the round, and 1–4 redirected play to a new clash. While players enjoyed the suspense—“I liked this element of chance; it added some color to the gameplay, because they got excited whenever the die was rolled”¹⁶⁶ (T15_20150813)—this randomness symbolically weakened the value of reasoning. As one record notes: “Die roll: the number on the die indicated the team. When the vote on a question ended in a tie, a new voting round was held in which everyone voted. A roll of 5 meant nothing happened; a 6 meant betting everything.”¹⁶⁷ (T15_20150813). The mechanic also echoed an earlier, rejected

165 „Nem világos, hogy a táblákra került kártyák száma mit befolyásol. 1-1 csapat győzelme is kérdéses, hiszen ez nem verseny – ha jól értettem. A felépített városi nincs kiértékelve inkább csak díszletnek tűnik.”

166 „Nekem tetszett ez a szerencsefaktoros dolog, színt vitt a játékmenetbe, mert izgultak dobásnál”

167 „Dobókocka: csapatok számát jelölte a kocka, ahol döntetlen lett a szavazás a felolvasott kérdésre, ott újabb szavazás lett, ahol mindenki szavazott. 5-ös semmi, 6-os mindent feltesz.”

“force element,” *knobstick* (M13_20150806), a proposed but ultimately unused mechanism that would have allowed the questioning team to “crush the others”¹⁶⁸ (E_20150806). Designers ultimately discarded it—“I’m not sure we want to include such a ‘power element,’ because it doesn’t necessarily fit the spirit of the game”¹⁶⁹ (E_20150806)—yet the dice roll of 6 recreated a similar effect in subtler form. It replaced domination through power with domination through luck, softening the symbolism but maintaining the outcome: dissent silenced, victory absolute.

Construction as message became most visible in the **Final Step**, where symbolism emerged in the act of building itself. Early rules had teams place magnetic stakes on their houses when declaring bets and remove half if consensus failed: “I suggested placing the stakes immediately and removing them gradually because I think it’s easier to follow—everyone can see it, and there’s no need for constant counting.”¹⁷⁰ (E_20150729). While this clarified progress (→ see **Feedback Mechanisms**), the act of removal resembled demolition, contradicting the game’s constructive ethos. Designers later reframed the mechanic: “it’s more visually engaging, better aligned with the game’s purpose, and it conveys a more positive message if players add elements rather than remove them. In other words: if we’re building rather than dismantling.”¹⁷¹ (E_20150806). Similarly, defining success as “The [team] wins whose house is the most complete”¹⁷² (E_20150806) reinforced competition rather than cooperation, and was subsequently revised toward shared achievement: “[...] here there can be no real winner and no real loser, and I’m not afraid that the game will turn into competition.”¹⁷³ (E_20150729).

Across these revisions, the symbolic layer of **Tactic Dice** oscillated between competition and collaboration, certainty and chance. Each rule carried an implicit message about agency, authority, and collective authorship—revealing how even minor design choices can subtly redefine the cultural meaning of play.

8.4.7.3 NEW! Feedback Mechanisms

Definition: Feedback mechanisms are visual or procedural signals that reflect player decisions and outcomes. They guide behavior toward the game’s goals and communication objectives by providing cues about progress and performance. ↔ See Sections 8.4.7.3 and 10.1.1.12.

168 „földbe döngölheti a többieket”

169 „nem biztos, hogy akarjuk, hogy legyen benne ilyen „erőelem”, mert nem feltétlenül passzol a játék szemléletéhez”

170 „A tétek azonnali elhelyezését és fokozatos eltávolítását azért javasoltam, mert szerintem egyszerűbben követhető, mert mindenki látja, nem kell számolgatni.”

171 „látványosabb, a játék céljának is jobban megfelel és pozitívabb az üzenete, ha a játékosok nem leveszik az elemeket, hanem felrakják. Másként: ha építkezünk és nem bontunk.”

172 „Az [a csapat] nyer, akinek a leginkább komplett a háza”

173 „[...] itt nem lehet sem igazi nyertes, sem igazi vesztes, és én nem félek attól, hogy versengésbe csap át a játék.”

In *Tactic Dice*, magnetic construction points served as the main feedback tool—visually representing player decisions and signaling progress. Intended to reinforce both strategic achievement and communicative goals such as collaboration and consensus (→ see **Communication Objectives**), their effectiveness depended heavily on visibility, clarity, and interpretability.

Color-coding made progress easier to follow, as each team was assigned magnets in a distinct color: “[...] they also need to have a clear overview of how they are doing and how the others are doing. They can do this easily and quickly if the magnets are grouped by color. How are they supposed to do that if everything is scattered here and there?”¹⁷⁴ (E_20150729). While this helped players track results, it also heightened competition, as participants focused more on individual progress than on shared construction (→ see **Symbolism in Gameplay**): “As far as I could tell, they were interested in how many elements they could collect.”¹⁷⁵ (T15_20150813).

The feedback mechanism lacked a shared reference point, making results difficult to interpret. Without a common benchmark, players struggled to interpret their scores: “At the end I asked them to count how many elements they had. We added it up, but since we had no basis for comparison, the number didn’t mean much.”¹⁷⁶ (T15_20150813). This highlighted that visibility alone was insufficient—feedback also needed collective meaning.

The circular board layout limited *spatial visibility* by creating uneven sight-lines, giving some players a limited view of others’ constructions: “Our game is a circle-game in the sense that the teams stand around the playing area, so necessarily they don’t all see the same things. I don’t know whether there is a solution that would let everyone see the building elements in the same complete way.”¹⁷⁷ (E_20150729). Facilitators proposed a simple fix: “The building took place sometimes on one side of the board, sometimes on the other; I think that’s not ideal. It would be better to collect the magnets on the outside throughout, and only at the end—during the closing—somehow make the result visible to everyone.”¹⁷⁸ (T15_20150813).

Together, these insights showed that feedback must do more than signal outcomes—it must also embody the game’s communicative aims (→ see

174 „[...] jól át kell látnia azt is, hogy hogy áll és hogy állnak a többiek. Ezt könnyen és gyorsan megteheti, ha a mágnesek színenként együtt vannak. Miként tudja ezt megtenni, ha mindenkől van itt is, ott is?”

175 „Én úgy vettem ki, hogy igenis érdekelte őket, hogy hány elemet gyűjthetnek.”

176 „A végén kértem, hogy számolják meg, hogy mennyi elemük van. Ezt összeadtuk, de mivel nem volt viszonyítási alapunk, ez a szám nem mondott sokat.”

177 „Játékunk körjáték abban az értelemben, hogy a csapatok a játéktér körül helyezkednek el, így szükségszerűen nem ugyanazt látják. Nem tudom, hogy van-e olyan megoldás, hogy mindenki ugyanúgy egyben láthassa az épülő elemeket.”

178 „Az építkezés hol a tábla egyik oldalán történt, hol a másikon, szerintem ez nem szerencsés, jobb lenne, ha végig kívül gyűjtenénk a mágneseket a végén, a lezáráskor tennénk vholgy mindenkinek láthatóvá az eredményt.”

Communication Objectives). Effective feedback aligns visibility with inclusivity, helping players perceive progress not just individually, but as part of a shared process of making meaning together.

8.4.7.4 NEW! Game Duration

Definition: Game duration refers to the overall length of play. It shapes the rhythm, depth, and inclusivity of small-group communication, affecting players' ability to engage meaningfully without losing energy or focus. ↔ See Sections 8.4.7.4 and 10.1.2.7.

In *Tactic Dice*, time proved to be a decisive design variable. A 45-minute session with twelve participants allowed sufficient space for discussion, *opinion clashes*, and *voting*—long enough for players to engage, but short enough to maintain momentum: “With 12 questions the game lasted about 45 minutes. In my view, that’s neither long nor short.”¹⁷⁹ (T15_20150813). Within this frame, arguments could unfold, evolve, and reach closure without fatigue.

Comparative experience across other prototypes revealed how context shaped the optimal duration. In *Street Parliament*, public-space sessions required brevity—about 15–20 minutes with up to six participants. In schools, by contrast, 45 minutes had to include introduction, reflection, and the participation of 30–35 students.

These observations underline a core principle: time frames communication. If play is too short, discussion remains superficial; if too long, attention disperses. Designing for an optimal duration means finding a balance—long enough to enable reflection and shared reasoning, yet flexible enough to adapt across settings and participant groups.

8.4.8 All Steps: Cultural Representation in Games

Definition: Cultural representation in games refers to how mechanics, roles, and interactions reflect or challenge societal values, norms, and power structures. Design choices—such as who speaks, how decisions are made, or what is rewarded—implicitly convey messages about authority, inclusion, and cooperation. ↔ See Sections 7.4.7, 8.4.8, 9.4.6, and 10.1.2.10.

In *Tactic Dice*, cultural meanings emerged not only from explicit rules but also from the values embedded in its mechanics. Attempts to enhance engagement through duels, wagers, and dice introduced new layers of competition and chance, transforming decision-making from structured deliberation into a hybrid of strategy, persuasion, and luck (→ see **Scoring System, Player Engagement**).

The development team explicitly questioned what these mechanics communicated: “Every idea that could make the gameplay more engaging needs to be examined—but at the same time, we must also consider what it communicates, what kind of spirit it conveys. ... What is the message if someone can win the

179 „A játék 12 kérdéssel kb 45 percig tartott. Szerintem ez se nem hosszú, se nem rövid.”

game by using a knobstick, that is, by forcing their own opinion onto others? ... What is the message if someone becomes the loser of a game about the use of urban space? Can one even 'lose'? ... Or what is the message if we demolish instead of build?"¹⁸⁰ (E_20150806). This reflection illustrates an awareness that play is never value-neutral. Each mechanic—whether tactical, chance-based, or expressive—carries implicit cultural messages about participation, authority, and agency.

Players and facilitators likewise linked their experiences to broader social and political contexts. One facilitator drew parallels to governance practice: "A new lesson for me from the game? It is a difficult question what this could mean in practice, and whether democratic functioning is actually feasible."¹⁸¹ (T15_20150813). Others engaged in more philosophical critique: "According to Plato, democracy is the rule of equally insignificant people, where those in power can stay on top only through force and all kinds of tricks [...] and the final stage of social development is tyranny [...]"¹⁸² (E_20150815a). And in relation to participatory planning practice, players expressed their doubts: "the good planning of a city is difficult to democratize"¹⁸³ (E_20150815a).

Across these reflections, *Tactic Dice* became a cultural lens, exposing tensions between democratic ideals and procedural realities. The game sparked reflection about governance, inclusion, and power. Ultimately, this underlines a central design responsibility: unless mechanics are carefully aligned with participatory intentions, games risk conveying unintended messages—ones that may resonate long after the session ends (T15_20150813).

8.4.9 Facilitation Tasks

Fig. 8.1 illustrates how small-group communication unfolded in *Tactic Dice*. While the diagrams highlight shifts in scoring, debate, and construction, they omit the facilitator—yet facilitation proved central to sustaining meaningful interaction. Thematic analysis revealed that facilitators were not neutral observers but co-creators of communication dynamics: they broadened perspectives, steered discussions, and guided reflective closure. Through these interventions, they influenced not only what was said, but how dialogue was interpreted and carried forward.

180 „Minden gondolatot meg kell vizsgálni, ami érdekesebbé teszi a játékmenetet, de ugyanakkor mindig meg kell vizsgálni azt is, hogy mit közvetít, milyen szellemiséget? ... Milyen üzenete van annak, ha valaki egy bunkó használatával, vagyis azzal, hogy ráerőlteti a saját véleményét a többiekre esetleg meg tudja nyerni a játékot? ... Milyen üzenete van annak, ha valaki vesztese egy térhasználatról szóló játéknak? Ha egyáltalán lehet „vesztíteni”? ... vagy annak, ha bontok építés helyett?”

181 „Számomra új tanulság, amit a játék hozott? Nehéz kérdés, hogy mit is jelenthet a gyakorlatban, megvalósítható-e a demokratikus működés.”

182 „Platón szerint a demokrácia az egyenlő senkik uralma, ahol a hatalmat gyakorlók csak erővel és mindenféle trükkal tudnak felül maradni [...] a társadalmi fejlődés legutolsó fokozata: a zsarnokság [...]"

183 „a város jó tervezése nehezen demokratizálható”

Two key facilitation tasks emerged as essential for inclusive and focused small-group communication:

- **Encouraging Diverse Perspectives:** Prompting participants to consider alternative viewpoints and balance debates when they became one-sided.
- **Concluding with Reflection:** Guiding closure that connected gameplay outcomes to shared insights and broader civic learning.

The following subsections elaborate on these facilitation tasks.

8.4.9.1 NEW! Encouraging Diverse Perspectives

Definition: Encouraging diverse perspectives refers to the facilitator's role in sustaining inclusive debate by prompting participants to consider alternative viewpoints and broadening discussion when it becomes narrow or one-sided. ↔ See Sections 8.4.9.1 and 10.2.6.

During testing, several questions that seemed straightforward in design proved difficult for players to debate. Prompts such as *Is graffiti art?* and *Should there be a car-free day in the city?* (E_20150729) often produced quick agreement and limited reasoning. Facilitators therefore adopted a more active role, preparing follow-up prompts that reframed or deepened the topic without prescribing opinions. In a debate about penalties, for example, one facilitator described their approach: "Would you impose stricter penalties on dog owners who leave dog waste on the street? → What counts as an appropriate punishment? Do punishments make sense at all? Fines, etc."¹⁸⁴ (E_20150729).

Such additions expanded the reasoning space, encouraging participants to consider legal, ethical, and social angles rather than remaining at the level of personal preference. When discussions became dominated by a single argument—often economic—facilitators intervened to introduce neglected dimensions, such as environmental or community aspects.

Through these subtle interventions, facilitators turned otherwise predictable exchanges into richer collective inquiry. By gently reorienting focus without imposing direction, they preserved the game's open character while deepening the diversity and inclusivity of small-group communication.

8.4.9.2 Closing with Reflection

Definition: Concluding with reflection refers to the facilitator's role in leading post-game discussions that help players process experiences, connect gameplay to broader themes, and consolidate shared insights. ↔ See Sections 7.4.8.4, 8.4.9.2, and 10.2.8.

In **Tactic Dice**, time constraints led facilitators to prioritize additional gameplay over reflective dialogue—a decision later recognized as a misstep

¹⁸⁴ „szigorúbban büntetné-e kutyakakit utcán hagyó gazdikat? ---> milyen a jó büntetés? Van értelme a büntetéseknek? Pénzbírság stb.”

(T15_20150813). Without a structured closing phase, the sense of shared accomplishment weakened, and the constructed city was left largely uninterpreted: “The city that gets built is not evaluated; it appears more like a back-drop.”¹⁸⁵ (E_20150815a).

This absence also reduced opportunities to connect the visible outcomes of play with collective reasoning. Designers later proposed solutions to integrate closure more clearly into the format: “The visualization of the collective construction would be strengthened if, at the end, we laid out the silhouettes side by side and jointly summed up the positions in each topic; following the example of participécs [another game developed by the kultúrAktív Association], we could also provide a point of comparison showing how their result relates to other sessions (in my experience, this provides the sense of accomplishment that individual competitiveness would otherwise seek).”¹⁸⁶ (E_20150815c).

Such reflection transforms play from an isolated experience into a moment of learning. It allows players to reinterpret the outcomes not only as points or constructions but as representations of collective decision-making. When framed by facilitation, these moments turn the temporary energy of play into longer-lasting civic understanding—linking the imaginative space of the game to the realities of participation.

8.5 Social Constructivist Landscape Theory Analysis

This section interprets the *Tactic Dice* prototype through the lens of social constructivist landscape theory, examining how communicative interaction, strategic behavior, and elements of chance shaped the social construction of landscape meanings during gameplay.

The analysis follows two analytical dimensions introduced in Section 4.4.2.3: (1) the processes through which landscape meanings emerge and are negotiated through communication (Section 8.5.1), and (2) the mediation of differentiated knowledge stocks shaped by landscape socialization (Section 8.5.2). Together, these perspectives allow for an interpretive reading of how deliberation, strategy, and randomness interacted in the construction and provisional stabilization of shared meanings.

185 „A felépített város nincs kiértékelve inkább díszletnek tűnik.”

186 „a közös építés vizualizációját erősíteni, ha a végén egymás mellé kiterítenénk a szilueteket és együtt összegeznénk, melyik témában mi a felállás, a participécs [egy másik kultúrAktív Egyesület által fejlesztett játék] mintájára pedig adhatunk egy összehasonlítási alapot, hogy más alkalmakhoz képest milyen eredményt értek el (tapasztalatom szerint ez megadja azt a sikerélményt, ami az egyéni nyerni akarás hiányol)”

8.5.1 Processes of Landscape Meaning-Making through Communication

During gameplay, *Tactic Dice* encouraged participants to articulate and negotiate landscape-related meanings through a sequence of communicative phases shaped by both strategic choices and chance-based mechanisms. These interactions resonate with central ideas in social constructivist landscape theory, particularly Kühne's (2015b, p. 29) understanding of landscape construction and Berger and Luckmann's notion of meaning stabilization.

In the initial phase of the game, participants formed teams and selected thematic domains (**Step 1: Teaming Up**). While explicit landscape-related debate had not yet begun, group composition already influenced subsequent communication by shaping which perspectives and experiences were more likely to surface later on. When teams selected questions for discussion, preliminary positions were articulated, externalizing individual and collective interpretations of landscape issues (**Step 2: Opinion Clash in Teams**).

Subsequent confrontation and debate phases created space for participants to justify, challenge, and refine these positions. Strategic partner selection influenced which viewpoints encountered opposition (**Step 3: Opinion Clash of Duelists**), while open debate allowed divergent knowledge stocks to surface (**Step 4: Open Debate**). Meanings were negotiated and, in some cases, partially aligned through argument exchange.

The introduction of chance through dice rolls disrupted a purely deliberative logic (**Step 5: Dice Round with Opinion Clash**). Even after extensive debate, randomized outcomes could override argumentative strength, affecting how meanings were stabilized. Voting (**Step 6: Voting**) and the final collective construction (**Final Step: Constructing with Consensus, Tactic & Chance**) translated negotiated—or randomly determined—positions into a shared spatial representation, giving material form to previously abstract arguments.

Taken together, these communicative moments illustrate how landscape meanings were exchanged, constructed, and negotiated, while their stabilization remained provisional and contingent due to the interplay of deliberation, strategy, and chance. The gameplay illustrates how key elements of meaning-making described in the literature can unfold in practice under contingent conditions.

The following subsections examine specific mechanisms shaping this process, particularly the role of open debate, strategic behavior, and chance in mediating meaning-making.

8.5.1.1 Open Debate

The unstructured **Step 4: Open Debate** allowed players to articulate diverse viewpoints: “when we discussed our arguments”¹⁸⁷, “the questions, listening to each other’s views”¹⁸⁸, “we were able to hear many different perspec-

187 „amikor megvitattuk az érveinket”

188 „a kérdések, egymás véleményének meghallgatása”

tives”¹⁸⁹ (E_20150815a). Participants described the discussion phase as a primary source of engagement: “what I clearly read from this reflects exactly what we keep saying to each other: that asking questions, debating, reaching agreements, and arguing your point is enjoyable”¹⁹⁰ (E_20150815a). While this phase supported externalization, the absence of structure occasionally hindered sustained focus and cohesion: “[...] an unstructured discussion that needs strong moderation”¹⁹¹ (T15_20150813). This indicates the need for balanced facilitation to maintain both openness and direction in meaning-making processes.

8.5.1.2 Randomness and Strategic Behavior

The introduction of chance through dice rolls in **Step 5: Dice Round with Opinion Clash** disrupted the direct link between deliberation and outcomes. Even after rich and sometimes passionate debates—“that’s exactly what’s interesting: immediate debate begins”¹⁹² (E_20150729)—the result depended partly on randomness: a roll of 5 earned zero points, while 6 secured all available points. This mechanism challenged the assumption that consensus or argument quality alone determines success, transforming deliberation into a hybrid of reasoning and probability.

8.5.1.3 Internalization and Understanding

Survey results revealed only partial internalization of new perspectives:

- 6 of 9 participants agreed with “I understand other people’s perspectives better”¹⁹³
- 4 of 9 agreed with “it was good to listen to others”¹⁹⁴
- 1 of 9 agreed “I was able to form my own opinion”¹⁹⁵
- 0 of 9 agreed “I changed my opinion.”¹⁹⁶

The interplay of strategic behavior and random outcomes may have limited deeper reflection and the integration of alternative viewpoints.

8.5.2 Mediation of Differentiated Knowledge Stocks through Game Structures

Participants in **Tactic Dice** were primarily urban activists and civic-engagement practitioners, reflecting a high degree of tertiary landscape socialization

189 „nagyon sokféle véleményt lehetett meghallgatni”

190 „egyértelműen az olvasom ki, amiről mi is folyton beszélünk egymás között: hogy a kérdések, vita, a megegyezés, érvelés az élvezetes”

191 „egy kötetlenebb beszélgetés [...], amit erősen moderálni kell”

192 „ez az érdekes, azonnal vita indul”

193 „jobban megértem mások véleményét”

194 „jó volt meghallgatni másokat”

195 „ki tudtam alakítani saját véleményem”

196 „változtattam a saját véleményemen”

(T15_20150813). This produced a strong collective knowledge base but sometimes mismatched the game's framing. As one participant remarked: "I think this game only provides meaningful help to those at a very basic level of thinking about what makes a city livable. Maybe it would be worth creating beginner/advanced question sets."¹⁹⁷ (E_20150815a).

This observation illustrates how the framing of questions determined whether expert knowledge could be expressed or remained latent.

The procedural structure of *Tactic Dice* further shaped how knowledge was filtered, amplified, or suppressed:

- **Step 1: Teaming Up:** Teams defined the units of discussion. Knowledge was already mediated here, as group composition determined which perspectives would align or be sidelined later.
- **Default rule (consensus-based questions):**
 - **Step 2: Opinion Clash in Teams:** Only unanimously supported questions advanced, filtering out disagreement and homogenizing team perspectives.
 - These filtered positions entered **Step 3: Opinion Clash of Duelists**, where teams tactically chose opponents. Strategic alignment further narrowed debate by avoiding conflicting perspectives (→ see **Tactical Dynamics**).
 - In **Step 4: Open Debate**, defense speeches reproduced these consensus positions, reinforcing pre-selected narratives rather than opening them up.
- **Alternative rule (non-consensus questions):**
 - Here, **Step 2** allowed contested questions to advance even without full agreement, bypassing **Step 3** and moving directly into **Step 4: Open Debate**.
 - Suppressed disagreements resurfaced, preserving knowledge diversity but making debates more unpredictable and cognitively demanding, requiring skilled facilitation (→ see **Communication Rules**).

Beyond these pathways, later stages continued to mediate knowledge expression:

- **Step 5: Dice Round with Opinion Clash:** Randomized outcomes disrupted deliberative logic; even well-argued positions could be erased by chance (→ see **Scoring System, Feedback Mechanisms**).
- **Step 6: Voting:** Where no consensus emerged, voting briefly reopened space for sidelined voices to re-enter.
- **Final Step: Constructing with Consensus, Tactic & Chance:** The resulting

197 „Szerintem ez a játék csak azoknak nyújt komolyabb segítséget, akik nagyon kezdő szinten vannak az élhető várossal való gondolkodásban. Lehet, hogy érdemes lenne kezdő/ haladó kérdéssorokat csinálni.”

built landscape embodied not only ideas but also the structural filters—consensus, tactics, and randomness—that had shaped them.

In summary, *Tactic Dice* demonstrated that knowledge mediation followed two distinct logics. Under the consensus rule, knowledge was progressively filtered and narrowed; under the non-consensus rule, diversity was preserved but more difficult to manage. In both modes, dice and scoring added contingency, destabilizing the link between argument quality and outcomes. This interplay of design and chance illustrates how the game's communicative structure simultaneously enabled and constrained the social construction of shared landscape meanings.

8.6 Communicative Action Theory Analysis

This section analyzes the *Tactic Dice* prototype through the theory of communicative action, examining how its design and facilitation supported or constrained equality, reason-giving, and consensus. Developed as a hybrid between tactical play and deliberative dialogue, the prototype introduced probabilistic outcomes and strategic interaction. These innovations aimed to energize decision-making but destabilized procedural balance, revealing how chance and manipulation can challenge the normative conditions of communicative rationality.

The analysis follows three dimensions introduced in Section 4.4.2.3: equitable participation (Section 8.6.1), reason-giving procedures (Section 8.6.2), and coherence and depth of agreement (Section 8.6.3).

8.6.1 Equitable Participation

Habermas's ideal speech situation presupposes freedom from coercion and equality of opportunity, where participants influence outcomes through the force of better arguments rather than authority, familiarity, or chance. *Tactic Dice* created a communication environment where equality existed procedurally but was repeatedly tested by strategy and randomness.

8.6.1.1 Game Design

The prototype structured interaction across several sequential steps that shaped inclusion and asymmetry:

- **Step 1: Teaming Up:** Players, often arriving from the same civic group, organized into small teams (→ see **Player Relationships**). This preexisting familiarity fostered comfort but excluded newcomers and reinforced informal hierarchies.
- **Step 2: Opinion Clash in Teams:** Within teams, members expressed yes/no stances informally without synchronized gestures or turn-taking (→ see **Ritualized Expression**). While efficient, this structure weakened procedural equality established in earlier prototypes.
- **Step 3: Opinion Clash of Duelists:** Teams selected opponents

strategically, pairing with like-minded rivals to maximize scores (→ see **Tactical Dynamics, Interaction Choice, Partner Selection, Scoring System**). The design thus enabled control over whom to confront, favoring tactical alignment over contestation and subtly eroding communicative balance.

- **Step 4: Open Debate**: Intended as the core deliberative phase, it lacked explicit rules for turn-taking or duration (→ see **Communication Rules**). Although all players could participate, unstructured discussion risked uneven voice distribution.
- **Step 5: Dice Round with Opinion Clash**: Introduced chance as a decision mechanism, shifting authority from discourse to probability (→ see **Symbolism in Gameplay**).
- **Step 6: Voting**: Temporarily restored procedural equality, but the symbolic weight of voting diminished after the preceding dice-based closure (→ see **Symbolism in Gameplay**).

Across these steps, equality fluctuated between structured opportunity and strategic control. Tactical pairing, probabilistic resolution, and unmoderated debate diluted the Habermasian premise of non-coercive inclusion.

8.6.1.2 Facilitation

Facilitation remained minimal. Moderators primarily ensured adherence to rules and timing (→ see **Enforcing Game Rules, Managing Transitions**). Without active moderation of the debate step (**Step 4**), asymmetries linked to social familiarity, confidence, and expertise persisted uncorrected. Players often shared professional lifeworlds within the same civic association, indicating high-quality argumentative exchanges during debate-like confrontations. This encouraged cohesion but marginalized outsiders (→ see **Player Affiliation, Player Diversity**). Newcomers participated less (→ see **Player Relationships**), constrained by both social distance and the absence of facilitative intervention.

8.6.2 Reason-Giving Procedures

This dimension examines whether **Tactic Dice** enabled participants to articulate and test reasons—the procedural foundation of rational discourse. Habermas defines communicative rationality as the mutual testing of validity claims of truth, normative rightness, and sincerity.

8.6.2.1 Procedural Framework and Communication Patterns

Communication in **Tactic Dice** unfolded through a multi-step structure that combined tactical choice and open-ended dialogue. Interaction began with internal team discussions (**Step 2**) and progressed through cross-team encounters (**Step 3–Step 6**). Across these moments, the *opinion clash* pattern known from **Clash** and **Parliament** reappeared in multiple forms—within teams in **Step 2**, between selected dueling partners in **Step 3**, between two chance-matched teams in **Step 5**, and collectively in **Step 6** to indicate closure. Only

Step 4: Open Debate explicitly invited reasoning, yet this potential was seldom realized.

Two distinct procedural logics emerged depending on whether players addressed consensus or non-consensus questions identified during **Step 2**, as one designer reflected: “It’s very easy to choose the consensus-questions; there was virtually no argument at all. Yet that’s exactly what’s interesting: immediate debate begins. The problem is, debate slows the game down. That’s a contradiction I don’t know how to resolve.”¹⁹⁸ (E_20150729).

Consensus questions, following the designed procedural order of the game:

- **Step 2: Opinion Clash in Teams:** Teams signaled yes/no stances with short gestures, leaving no room for justification.
- **Step 3: Opinion Clash of Duelists:** Teams strategically selected opponents with assumed similar views (→ see **Tactical Dynamics, Scoring System, Partner Selection, Group Division**), producing predictable agreement and bypassing contestation.
- **Step 4: Open Debate:** Intended as a reasoning phase, but optional and un-facilitated. Lacking turn-taking or accountability, talk drifted into casual conversation.
- **Step 5: Dice Round with Opinion Clash:** Linked reasoning outcomes to the roll of the dice, displacing conscious decision-making with chance (→ see **Tactical Dynamics, Interaction Choice, Scoring System**).
- **Step 6: Voting:** Concluded the sequence through procedural majority vote.

This version blended deliberative intention with strategic logic: although **Step 4** provided a formal slot for argumentation, the surrounding incentive structure rewarded consensus and speed over reflection.

Non-consensus questions, adapted play: When disagreement persisted in **Step 2**, participants collectively skipped **Step 3: Opinion Clash of Duelists** and moved directly to **Step 4: Open Debate**, recognizing that dueling was ill-suited to unresolved issues. This spontaneous adaptation signaled genuine interest in discussion but also exposed the absence of procedural support. Without facilitation or rules to guide turn-taking, these debates became long, emotionally charged, and difficult to conclude. Non-consensus rounds therefore generated deeper engagement but remained fragile—rich in exchange yet lacking the structure to stabilize as rational argumentation.

The contrast between these two modes revealed the core tension of **Tactic Dice**: the formal design encouraged tactical consensus, while players themselves sought communicative openness. Deliberative potential appeared precisely where the rules were bent or suspended—showing that the structure offered the form of discourse but not yet its discipline.

198 „Nagyon könnyű kiválasztani a konszenzusos kérdéseket, gyakorlatilag alig volt érvelés. Pedig ez az érdekes, azonnal vita indul. Viszont a vita lassítja a játékot ez olyan ellentmondás, amit nem tudom, hogy oldunk fel.”

8.6.2.2 Rational Argumentation and Engagement with Validity Claims

Moments of reasoning emerged in **Step 4: Open Debate**. In these exchanges, players tested claims of truth, normative rightness, and sincerity—questioning authenticity, factual assertions, and collective responsibility. Yet the absence of game rules or facilitation limited reciprocity (→ see **Communication Rules**): statements followed one another without systematic rebuttal or justification, and facilitators noted that the argumentation resembled “[...] a more open-ended discussion that requires heavy moderation.”¹⁹⁹ (T15_20150813).

Three communicative factors of the yes-or-no landscape questions—or landscape pulses—shaped the quality of reasoning (→ see **Landscape Pulse**):

- *Divisiveness*: Questions provoking disagreement generated the most substantive debate, activating both factual and moral reasoning.
- *Expertise Level*: Professionally homogeneous groups quickly exhausted simple prompts and began inventing new, policy-oriented questions, suggesting that resonance with participants’ lifeworlds deepened reflection (→ see **Landscape Experience**).
- *Presentation*: Clarity and concreteness of phrasing determined interpretability; ambiguous wording blurred which validity claim was at stake.

When these three conditions aligned, brief moments of rational discourse surfaced—but without procedural reinforcement they remained episodic. **Tactic Dice** thus revealed that deliberation depends as much on communicative framing and facilitation as on player capacity and willingness to reason.

8.6.2.3 Facilitation and Support for Rational Argumentation

No facilitative structure supported **Step 4: Open Debate**. Discussions unfolded spontaneously, guided by players’ own initiative. Without moderators to redistribute turns, clarify points, or sustain focus, communicative symmetry was not guaranteed (→ see **Facilitating Discussion and Debate**). In Habermasian terms, the discourse lacked procedural safeguards for testing validity claims.

The absence of facilitation clarified its necessity. Moderation is not merely logistical—it maintains the conditions under which reasoning can emerge. In **Tactic Dice**, facilitation could have stabilized exchanges by prompting justification, balancing faster and quieter speakers, and protecting minority voices (→ see **Facilitating Discussion and Debate; Encouraging Diverse Perspectives**). Its omission left argumentation open but undirected—energetic yet fragile.

8.6.3 Coherence and Depth of Agreement

Agreement in **Tactic Dice** fluctuated between strategy, randomness, and occasional reflection. Three main decision moments—**Step 3: Opinion Clash of**

199 „egy kötetlenebb beszélgetés [...], amit erősen moderálni kell”

Duelists, **Step 5: Dice Round with Opinion Clash**, and **Step 6: Voting**—produced distinct forms of closure along Habermas’s spectrum.

8.6.3.1 Depth of Agreement

In **Step 3**, the questioning team selected duelists from other teams, often those likely to agree. Success meant immediate construction in the **Final Step: Constructing with Tactic**. The harmony achieved was tactical and prearranged—*Übereinstimmung*, concurrence without reasoning, or *Gleichgestimmtheit*, emotional alignment born of cooperation. The scoring system rewarded this surface unity (→ see **Tactical Dynamics**).

Following disagreement, **Step 4: Open Debate** created a space for reasoning but ended in **Step 5: Dice Round with Opinion Clash**, where dice rolls determined whether arguments were rewarded or nullified. The die’s sixth face symbolically restored the effect of the discarded *knobstick* mechanism—which had been proposed but not implemented and would have allowed the questioning team to erase the opinions of others in **Step 3**—resulting in a random act of total approval or rejection (→ see **Symbolism in Gameplay**). Consensus or disagreement thus resulted from probability rather than communication.

Step 6: Voting closed the cycle, yet by this stage its symbolic power had faded (→ see **Symbolism in Gameplay**). Players repeated the gesture of *opinion clash* as routine confirmation. The resulting agreement rarely exceeded *Einigung*—a pragmatic compromise sufficient for action but detached from understanding.

8.6.3.2 Game Design and Facilitation for Agreement

Game design and facilitation jointly determined how agreement was reached and how decisions acquired meaning within **Tactic Dice**.

The scoring system and decision mechanisms privileged speed, prediction, and chance over reflection. Tactical elements—such as selective pairing in **Step 3: Opinion Clash of Duelists** and probabilistic outcomes in **Step 5: Dice Round with Opinion Clash**—encouraged players to secure success through control or luck rather than persuasion (→ see **Tactical Dynamics**, **Scoring System**, **Symbolism in Gameplay**). These mechanics framed consensus as a measurable event, not a communicative process. The dice, symbolically replacing rational closure with randomness, transformed decision-making into spectacle. Rolling a six guaranteed automatic victory, symbolically reviving the authority of the proposed but unused *knobstick* mechanism. The gesture of chance thus supplanted argument: agreement or rejection became statistical rather than discursive.

Facilitation, kept intentionally minimal, reinforced these tendencies rather than balancing them. Moderators maintained rhythm and procedural order (→ see **Managing Transitions**, **Enforcing Game Rules**) but did not intervene to slow pace, clarify reasoning, or reintroduce reflection (→ see **Facilitating Discussion and Debate**). As a result, dissent felt futile, and closure occurred by rule rather than by understanding. Without mediating interpretation, decisions became procedural rituals—efficient but hollow in communicative depth.

In effect, both design and facilitation converted dialogue into a form of procedural performance. Together, these dynamics produced mainly *Übereinstimmung* and *Gleichgestimmtheit*—surface alignment and emotional resonance—rather than *Verständigung*, mutual understanding. Occasional moments of reasoned exchange appeared during *open debates* but were neutralized by random or tactical closure. In this way, *Tactic Dice* revealed how probabilistic and competitive design elements can erode communicative decision-making: replacing persuasion with prediction and transforming consensus from shared meaning into quantified success.

9

Small-Group Communication in *Tactic Card*

Developed in late 2015 during Phase IV of the *Urbanity* project, *Tactic Card* built on insights from earlier prototypes, centering on *structured debate* and deliberate argumentation through personalized debate cards. Balancing flexibility and formal rules, it invited players to select topics most relevant to them for discussion, testing how agency and topic ownership affect engagement and agreement across diverse social contexts.

The chapter reconstructs the prototype's development (Section 9.1) and gameplay structure (Section 9.2), followed by a visual analysis of communication patterns (Section 9.3), a thematic analysis of influential design and facilitation factors (Section 9.4), and theoretical reflection through social constructivist landscape theory (Section 9.5) and communicative action theory (Section 9.6).

9.1 Prototype Development and Testing

Tactic Card was conceived in response to *Tactic Dice*'s reliance on randomness. The design goal was to formalize structured argumentation while preserving the flexibility needed for different group sizes and facilitation settings (Table 9.1). Dice mechanics were replaced by debate cards, which allowed players to reopen closed questions and initiate reasoned exchanges (E_20150815a; E_20150817).

Team dynamics were restructured to support both small-scale (1–6 players) and larger public formats (6–18 players), increasing adaptability and inclusivity.

The prototype was tested across diverse contexts—including academic conferences, organized expert groups, and school sessions (T16–T22, Table 9.2). These sessions confirmed the game's accessibility, flexibility, and capacity to foster dialogue-rich, inclusive interaction across different age groups and participation formats.

Table 9.1 *Tactic Card*: Game development workshops. Table by the author.

Workshop Nr.	Brief description of the event
M14_20150818 (Phase III/IV)	Developed core game concept: structured debate with adaptable group sizes. Integrated learnings from <i>Tactic Dice</i> .
M15_20150905 (Phase III/IV)	Tabletop testing with invited players. Mechanics refined and debate cards introduced for flexible argumentation.
M16_20150907 (Phase IV)	Finalized rules. Ensured smooth game flow and adaptability for both small and large groups.

Table 9.2 *Tactic Card*: Play tests. Table by the author.

Gameplay Nr.	Brief description of the event	Player Nr.	Age of Players	Place played
T16_20151009	Mind the Game II Conference: rapid demo for urbanists and gamification experts (T16_20151009; Tóth & Szilágyi-Nagy, 2015, October 9)	35<	Adults	Indoor
T17_20151017	Team-building with Belső Kertek Csoport: organized courtyard greening group	7-15	Adults	Outdoor
T18_20151128	Játékos Lét Conference: fast-paced demo with small, ad-hoc gamer groups (Gameful Day; T18_20151128; Szilágyi-Nagy & Zajacz, 2015, November 28)	35< Several 1-6	Mixed	Indoor
T19_20151203	Board Game Club Pécs: organized group of board game enthusiasts	7-15	Adults	Indoor
T20_20151210	Design Meetup Conference: post-conference workshop with urbanists and educators (T20_20151210; Szilágyi-Nagy & Gyárfás, 2015, December 10)	7-15	Adults	Indoor
T21_20151215	School class session: first group of high school students in Gödöllő	16-35	High school	Indoor
T22_20160123	School class session: second group of high school students in Gödöllő	16-35	High school	Indoor

9.2 Game Concept and Rules

Tactic Card builds upon the shared structure of *Parliament* and *Tactic Dice* but replaces randomness with reasoned argumentation. The game emphasizes persuasive, reflective dialogue through a four-step communication framework that can be extended by playing debate cards to reopen discussion.

This version prioritizes discursive depth over speed or chance, adapting fluidly between intimate small-group sessions and larger facilitated debates.

9.2.1 Game Setup

The setup mirrors previous prototypes: a central abstract city board with six magnetic buildings symbolizing thematic urban categories—*livable city*, *renewing city*, *caring city*, *smart city*, *sustainable city*, and *self-organizing city*.

If more than six participants play, they form teams of equal size and position themselves around the corresponding buildings according to their chosen themes. Each team receives a share of the full deck of 96 yes-or-no question cards (16 per theme) and two debate cards. Magnetic construction points are pre-distributed on the board, visually framing the spatial zones of team activity.

9.2.2 Goal of the Game

Teams compete to construct the city by earning construction points through *opinion duels* with other teams. Immediate consensus yields modest rewards, while playing debate cards enables deeper argumentation and potentially higher scores.

The team with the most construction points wins—yet the resulting cityscape symbolically reflects shared urban values. As the designers summarized: “The goal is for the city to be built and developed with as much agreement and shared values as possible.”²⁰⁰ (T19_20151203).

9.2.3 Communication Steps

Gameplay unfolds across four main communication steps that structure interaction, followed by a final step of symbolic construction. Each step represents a distinct communicative mode, moving from quick stance-taking to extended deliberation and collective decision-making.

- **Step 1: Teaming Up:** Players organize into teams based on thematic categories, position themselves behind the corresponding magnetic buildings, and receive their sets of question and debate cards.
- **Step 2: Opinion Duel Between Teams:** The facilitator designates a questioning team and a responding team. The questioning team poses a yes-or-no question; both teams signal their stance simultaneously using hand gestures (raising hands for “yes,” squatting for “no”).
 - Scoring: 0 points = tie; 1 point = simple majority; 2 points = full consensus.
 - The questioning team may either accept the result → proceed to **Final Step: Constructing with Consensus** and return to **Step 2**, or play a debate card to trigger **Step 3**.
- **Step 3: Structured Debate:** At least one representative from each stance (yes/no) must speak, though all players are encouraged to contribute. Discussion continues until the facilitator calls for a vote.

200 „A cél, hogy minél nagyobb egyetértésben és közös értékek mentén épüljön és fejlődjön a város.”

- **Step 4: Voting:** The questioning team re-reads the original question. All players vote simultaneously using hand gestures. The result determines final scoring.
- **Final Step: Constructing with Debate:**
 - 0 points = tie
 - 3 points = majority supports the questioning team's stance
 - 4 points = full consensus
 - Optionally, scoring may reflect the number of individual players aligned with the majority.
 - → In all cases, play returns to **Step 3**.

The game concludes when all question or debate cards are used. Beyond competition, **Tactic Card** highlights argumentation as a cooperative practice—balancing persuasion, reflection, and consensus-building in participatory urban discourse.

9.3 Visual Analysis of the Small-Group Communication Process

Fig. 9.1 Tactic Card: Visual analysis of the small-group communication process. Foldout diagram with legend (see pocket at the end of the volume). The legend applies to all diagrammatic detail views in Chapter 9. Graphic by the author.

This section analyses how small-group communication unfolded in **Tactic Card** through visual analysis, following the analytical framework introduced in Section 4.4.2.1. The communication steps outlined in Section 9.2 are synthesized in the overview shown in Fig. 9.1, which serves as the reference legend for the interpretation presented in this section.

The following subsections (Sections 9.3.1–9.3.4) examine how players engaged in opinion duels, structured debates, and collective voting from four analytical perspectives: temporal order, spatial activation, forms of landscape-related dialogue, and the role of facilitation. The analysis highlights how the prototype's design fostered reflective, reasoned exchange while maintaining a clear procedural rhythm.

Insights from this section inform the thematic exploration of communicative factors presented in Section 9.4 and contribute to the cross-case synthesis and the *Communication Pattern Analysis Method* presented in Chapter 11.

9.3.1 Temporal Structure: Steps, Snapshots, and Looping Rhythm

Interaction unfolds through four communication steps (gray boxes), concluding in one of two **Final Steps** (black boxes).

Two black arrows mark the game's dual-loop system:

- **Loop 1:** Begins with **Step 1: Teaming Up**, followed by **Step 2: Opinion Duel Between Teams**. Outcomes are resolved in **Final Step A**, after which the game loops back to **Step 2**.

- **Loop 2:** If a debate card is played in **Step 2**, play advances to **Step 3: Structured Debate**, followed by **Step 4: Voting**. The result is captured in **Final Step B** before looping back again to **Step 2**.

Unlike earlier prototypes, there are no internal loops within individual steps. However, **Step 3** contains an extended sequence of snapshots, emphasizing the temporal density of inclusive, structured deliberation. This design highlights **Tactic Card**'s transition from tactical, fast-paced play to reasoned, reflective discussion.

9.3.2 Communication Zones and Spatial Activation

Interaction occurs across four communication zones, each representing a distinct mode of engagement:

- **Core zone:** The central game board, activated only in the **Final Steps**, visualizes the outcome of each round.
- **Team zones:** Gray dashed areas where teams stand during play. These zones are static—organizational rather than communicative.
- **Duel zones:** Highlighted with colored dashed lines in **Step 2**, marking which two teams are clashing. The color corresponds to the questioning team.
- **Game space:** The surrounding gray field becomes fully active during **Steps 3 and 4**, hosting inclusive *debate* and *collective voting*.

In this prototype, the facilitator is depicted for the first time, underscoring their structural role in coordinating flow and maintaining fairness.

As gameplay progresses, communication zones expand dynamically—from localized *opinion clashes* (**Step 2**) to *open debate* and group-wide participation (**Steps 3–4**).

Although this expansion enables broader engagement, in-depth dialogue is often dominated by recurring speakers from the original dueling teams, while others participate mainly through final voting.

9.3.3 Landscape Communication Patterns

Landscape questions appear once per round—triggered by a pulse (white arrow) and answered with a simultaneous “yes” (Y) or “no” (N) from two selected teams (**Step 2**). If both teams agree, the round concludes immediately with scoring and no further exchange. If disagreement arises, a debate card may be played, triggering **Step 3: Structured Debate**, where all players can participate in deliberation.

During debate, pro and contra arguments must be voiced publicly. Although anyone may join, discussions are typically led by members of the dueling teams, while others act as respondents or observers.

Subsequently, **Step 4: Voting** opens to all players, who cast a symbolic vote determining the final result.

Unlike the chance-driven *Tactic Dice*, *Tactic Card* establishes a direct link between argumentation and outcome: structured reasoning determines scoring rather than randomness. This shift reinforces deliberative integrity, fostering alignment between communicative depth and game progression, and promoting slower, more inclusive landscape dialogue.

9.3.4 Facilitator's Role

For the first time in the series, the facilitator is visually represented within the interaction diagram, marking their dual function as both procedural guide and reflective observer. While they regulate timing, fairness, and transitions, they refrain from influencing content, allowing players full ownership of debate.

Beyond moderation, the facilitator's reflective work—documenting observations and synthesizing insights—contributes to iterative improvements in both facilitation practice and game design.

This evolution signifies a broader methodological shift across the *Urbanity* series: from rule-enforcement toward dialogic support, where facilitation itself becomes a tool of learning.

9.4 Thematic Analysis of Factors and Facilitation Tasks of the Game Design Archive

This section identifies the factors and facilitation tasks influencing small-group communication in *Tactic Card*, following the thematic analysis procedure described in Section 4.4.2.2

Sources include workshop minutes, observations from test events, email discussions, conference demonstrations (Szilágyi-Nagy & Gyárfás, 2015, December 10; Szilágyi-Nagy & Zajacz, 2015, November 28; Tóth & Szilágyi-Nagy, 2015, October 9), blog posts (kultúrAktív Egyesület, 2015, August 28, 2015, December 12, 2016, February 6, 2017, April 22; Mindspace, n.d.), and structured questionnaires administered during school sessions (T21_20151215; T22_20160123). These sources explored questions such as: "What were the lessons of the game in terms of content? Which questions sparked debates and what kinds of arguments did participants use? How do young people perceive these urban issues, and which of them resonate with them more deeply?"²⁰¹ (E_20150817); or "How does knowledge transfer, skill and competence development occur during a given session, and how can attitudes be changed?"²⁰² (T21_20151215).

Players responded to questions such as:

201 „mi volt a játék tanulsága a tartalomra vonatkozóan? Melyik kérdéseknél alakultak ki viták és milyen szempontokkal érveltek? Hogy látják a fiatalok ezeket a városi problémákat, mi az, ami mélyebben érinti őket"

202 „Hogyan valósul meg egy-egy játék során az ismeretátadás, képesség- és kompetenciafejlesztés, valamint hogyan lehet attitűdöt megváltoztatni?"

- *What did they enjoy most about the game?*²⁰³
- *What did they dislike? Were there boring or unclear parts?*²⁰⁴
- *Would they play it again?*²⁰⁵
- *Do they usually think or talk about these issues? If yes, where and about what?*²⁰⁶
- *Which topics can they recall?*²⁰⁷
- *Which moments can they recall?*²⁰⁸
- *Was there any new information in the game? What did they learn?*²⁰⁹
- *Was it easy to argue? For which topics was it easy, and for which was it difficult? Were there any topics where they could not formulate arguments because the issue felt too distant from them?*²¹⁰

The thematic analysis follows the communication steps introduced in Fig. 9.1. Each subsection pairs a brief interaction summary with the step's influential factors and facilitation tasks (Sections 9.4.1–9.4.5). Cross-cutting factors (Section 9.4.6) and facilitation practices (Section 9.4.7) conclude the analysis. **Step 3: Structured Debate** (Section 9.4.3) is further divided into two subsections—factors observed in adult groups (Section 9.4.3.1) and in adolescent groups (Section 9.4.3.2)—to account for the distinct communication patterns identified.

Findings from this section contribute to the *Game Design Catalogue* and *Facilitation Guide* (Chapter 10).

9.4.1 Step 1: Teaming Up

In **Step 1: Teaming Up** (Fig. 9.2), players prepare for the game by forming thematic teams.

Snapshot 1.1 depicts the central game board (black area) displays six magnetic buildings, each representing a possible urban topic (e.g., *renewable city*, *sustainable city*, *smart city*). These serve as future sites for score collection and construction. Around the board lies the grey game space, divided into potential communication zones (dashed lines), each corresponding to a team. For the first time in the visual analysis, the facilitator is explicitly represented (black dot), positioned so they can both see and hear the teams—indicating a strengthened role in shaping gameplay.

203 Mit élveztek a leginkább a játékban?

204 Mi nem tetszett nekik? Unalmas, nem érthető részek?

205 Játsszanának újra vele?

206 Szoktak ezeken a kérdéseken gondolkodni/beszélgetni? Ha igen, hol miről?

207 Milyen témákat tudnak felidézni?

208 Milyen pillanatokot tudnak felidézni?

209 Volt valami új információ a játékban? Mit tanultak?

210 Könnyű volt érvelni? Melyik témánál volt könnyű, és melyiknél nehéz? Volt esetleg olyan, ahol nem tudtak érvelni, mert a téma annyira távol áll tőlük?

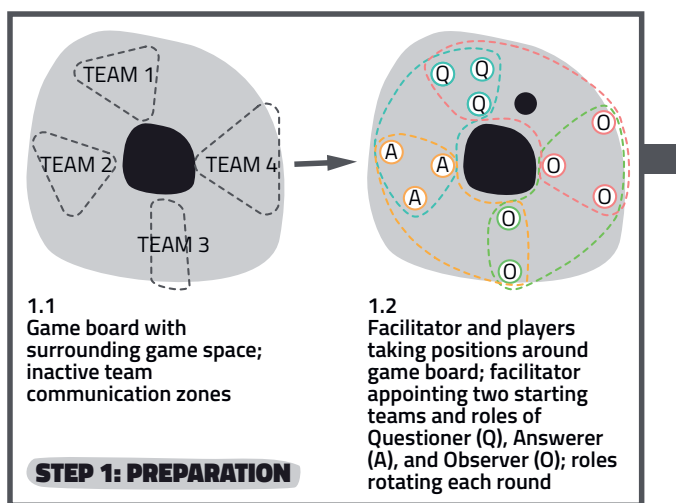


Fig. 9.2 Tactic Card: Step 1: Teaming Up. Detail from Fig. 9.1 (see legend in foldout figure in the pocket at the end of the volume). Graphic by the author.

Snapshot 1.2 shows how players stand behind their chosen building, visually linking themselves to a theme (indicated by silhouette color). Each team receives a set of yes-or-no question cards related to its topic, plus two debate cards that may escalate brief *opinion clashes* into *structured debates*. Colored dashed lines foreshadow the duel zones that will activate in later steps. At this point, the facilitator assigns starting roles: the turquoise team as the questioning team (Q), the orange as the answering team (A), while green and red remain inactive observers (O). Because turquoise will question and orange will answer, their shared communication zone is already highlighted in turquoise, marking the site of the upcoming exchange.

Although no landscape discussion takes place yet, this step quietly establishes the foundation of interaction spatially and socially. By linking each player to a thematic building and mapping out potential communication zones, the setup anchors roles, themes, and spatial positions.

9.4.1.1 Group Size

Definition: Group size refers to the total number of players participating in a session, shaping how easily participants can engage, contribute, and sustain small-group communication. It affects interaction flow, participation equity, and pacing. ↔ See Sections 7.4.1.5, 9.4.1.1, and 10.1.1.7.

In **Tactic Card**, group size proved decisive for engagement. Larger groups often slowed the game, producing long waiting times and diminishing participation, while smaller ones enabled more dynamic exchanges but demanded steadier facilitation to sustain focus.

Adolescent participants voiced frustration with slow pacing in large groups (T21_20151215):

- “I really liked the idea—it was thought-provoking and interesting, but a bit slow”²¹¹
- “In my view, it became monotonous after a while, so I wouldn’t play it again more than once.”²¹²
- “With this many people, we were a bit too many for the game; it took a long time before someone got their turn again.”²¹³

To counteract this, players themselves proposed simple adjustments—such as tighter time management—to keep energy up: “The gameplay could be made faster and more exciting by using an hourglass.”²¹⁴ (T21_20151215).

9.4.1.2 Group Division

Definition: Group division is the structural arrangement of participants into one or more interaction units—fixed, random, or player-chosen—that shapes who interacts with whom, how often, and in what capacity. This design element guides the intensity, sequence, and equity of small-group communication. ↔ See Sections 6.4.1.1, 7.4.1.1, 8.4.3.4, 9.4.1.2, and 10.1.1.8.

In **Tactic Card**, teams were assigned by the facilitator rather than self-organized. Players were grouped by lottery into teams of two or three, with one appointed as the questioning team and its neighbor as the answering team. This structure created an active communication zone of roughly six to eight players, while others waited as observers. The format narrowed interaction but also reinforced a sense of contest between paired teams.

Two tensions appeared. First, in larger student groups (18 players), teams were still seen as too large: “There were too many of us in one team; I think two people per team would be ideal.”²¹⁵ (T21_20151215). Second, random assignment sometimes placed players in positions misaligned with their views: “The teams shouldn’t be assigned randomly, because it’s quite difficult to argue for a type of city you don’t agree with.”²¹⁶ (T21_20151215). The absence of an internal consensus mechanism before selecting questions heightened these mismatches—unlike in **Clash**, **Parliament**, and **Tactic Dice**, where teams negotiated their stance first. These patterns suggest that while random grouping ensured fairness, it could also dilute identification with the theme and reduce communicative depth.

211 „Az ötlet kifejezetten tetszett, elgondolkodtató és érdekes, viszont egy kicsit lassú”

212 „Véleményem szerint egy idő után monotonná vált, ezért egynél többször nem játszanék vele újra.”

213 „Ennyien kicsit sokan voltunk ehhez a játékhoz, hosszú idő telt el, míg újból sorra kerülhetett valaki.”

214 „A játékmenetet lehetne gyorsítani és izgalmassá tenni egy homokórával.”

215 „Egy csapatban túl sokan voltunk, szerintem 2 fő lenne ideális egy csapatban.”

216 „A csapatokat nem sorsolásszerűen kéne kiválasztani, mert elég nehéz egy olyan várostípusnál érvelni, amivel nem értesz egyet.”

9.4.1.3 Ambient Conditions

Definition: Ambient conditions refer to the physical characteristics of the environment—such as noise, weather, seating, and spatial arrangement—that influence how players focus, interact, and sustain small-group communication. ↔ See Sections 7.4.1.7, 9.4.1.3, and 10.1.2.2.

Across playtests, participants noted that the game's spatial setup shaped their comfort and willingness to engage. As one student observed: “In my opinion, we should have started the game sitting down from the beginning.”²¹⁷ (T21_20151215). This feedback indicates that more stable, seated indoor arrangements may better support sustained and reflective exchanges, whereas standing setups—though visually dynamic—can shorten attention and limit the depth of verbal interaction. Similar preferences surfaced in earlier prototypes, hinting that bodily comfort quietly frames the tone and duration of dialogue.

9.4.2 Step 2: Opinion Duel Between Teams

In **Step 2: Opinion Duel Between Teams** (Fig. 9.3), the first cross-team communication unfolds around a shared landscape issue.

Snapshot 2.1 shows the turquoise team (*caring city*) poses its prepared question to the orange team (*renewable city*). A designated turquoise player reads the question aloud, sending the pulse across the activated communication zone.

Snapshot 2.2 captures the simultaneous stance-taking: on the count of three, both teams signal their position—raising a hand for “yes” or squatting for “no.” While these two teams are active, the others remain passive observers. Scoring depends on alignment with the questioning team:

- Full consensus → 2 points
- Majority → 1 point
- Tie or minority → 0 points

From here, two possible pathways emerge:

- **Case A, Final Step A:** If the questioning team accepts the result, they collect points and immediately place construction pieces on their thematic building. The answering team then becomes the new questioning team.
- **Case B, Step 3:** If dissatisfied, the questioning team may escalate by revealing a debate card, turning the clash into a structured discussion.

At this stage, communication is brief and highly formalized—a quick *opinion clash* where teams translate stances into gestures before deciding whether to settle or to extend the exchange. The moment captures a recurring tension in the **Tactic Card** design: the pull between efficient scoring and deeper deliberation. As in earlier prototypes, this step works as a hinge, setting up the choice between tactical closure and communicative exploration.

²¹⁷ „Szerintem alaphól ülve kellett volna kezdeni a játékot.”

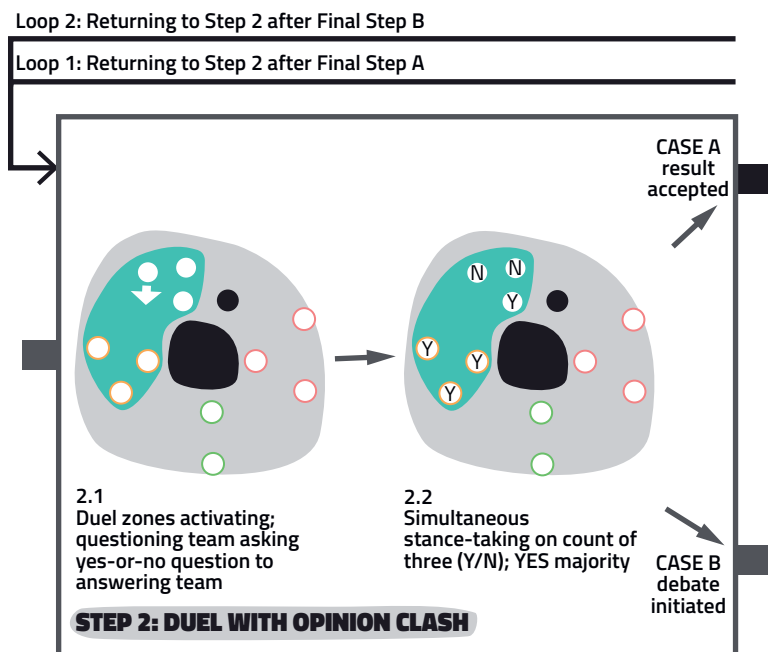


Fig. 9.3 *Tactic Card*: Step 2: Opinion Duel Between Teams. Detail from Fig. 9.1. Graphic by the author.

9.4.2.1 Tactical Dynamics

Definition: Tactical dynamics refer to strategic behaviors shaped by game mechanics that influence how players interact and communicate. When players aim to optimize outcomes—by scoring, avoiding conflict, or accelerating play—these decisions affect group dialogue and the depth of engagement. ↔ See Sections 8.4.3.1, 9.4.2.1, and 10.1.1.13.

In *Tactic Card*, tactical behavior often dominated gameplay as participants sought quick consensus to gain points efficiently. Especially among high school students (T21_20151215; T22_20160123), discussions tended to remain on the surface: players mirrored one another's gestures rather than entering argument. As one noted, "The players rarely entered into debate [...] it may be that not everyone even dared to argue; instead, watching the other person's reaction, they simply gave the same answer."²¹⁸ (T21_20151215).

Several interconnected factors reinforced this pattern:

- *Player age* influenced conflict avoidance, as younger participants were less comfortable with open disagreement (→ see **Player Age**).
- *Communication mode* shaped predictability—visible gestures such as hand raises or squats made answers easy to anticipate, encouraging alignment over confrontation (→ see **Communication Mode**).

²¹⁸ „A játékosok ritkán szálltak vitába, [...] lehet, hogy nem is mindenki mert vitába szállni, inkább a másik reakcióját figyelve azonos választ adott.”

- *Scoring system* rewarded consensus, reducing incentives for argumentation (→ see **Scoring System**).
- *Player engagement* varied across individuals: some enjoyed debate and used debate cards, while others avoided them to keep play quick and harmonious (→ see **Player Engagement**).
- *Interaction choice* further amplified these differences, as the option to escalate with a debate card allowed some to bypass conflict while others sought it (→ see **Interaction Choice**).

These mechanisms collectively encouraged agreement-seeking. Not all participants appreciated it—“I didn’t like it when someone deliberately gave the same answer as I did just so they wouldn’t have to argue”²¹⁹ (T22_20160123)—and some students also proposed ways to stimulate debate:

- Altering communication mode by having players turn their backs to one another when responding, making gestures unreadable: “For the responses, I think it would help if the players turned their backs to each other. That way there might have been more debates, because it’s easy to read from someone’s gestures or face what they’re going to answer”²²⁰ (T21_20151215).
- Allowing more debate opportunities by removing the one-card limit: “One thing you could change is having more than one debate card, because with only one we had fewer chances to argue for our own opinions. There were more yes–yes / no–no answers where we didn’t explain why we thought what we did”²²¹ (T21_20151215).
- Making debate mandatory in each round: “you could make debating mandatory in each round”²²² (T21_20151215).

These reflections show how tactical dynamics can unintentionally suppress disagreement when mechanics reward harmony. Minor rule adjustments—such as requiring at least one debate per round or concealing gestures—could bring the game’s strategy and its communicative aims (→ see **Communication Objectives**) into closer alignment.

9.4.2.2 NEW! Player Authenticity

Definition: Player authenticity refers to the degree to which communication reflects players’ genuine thoughts, feelings, and intentions. Drawing on

219 „Nem tetszett, amikor valaki direkt ugyanazt válaszolta, mint én, csak azért, hogy ne kelljen érvelnie”

220 „A feleletnél a kérdésekre szerintem lehetne, hogy mondjuk a játékosok háttal fordulnak egymásnak. Így talán több vita lett volna elhasználva, mert könnyű a gesztusokból, arcból kiolvasni, hogy mit fog válaszolni a másik”

221 „Amin esetleg változtatni lehetne, hogy ne csak egy vita kártya legyen, mert így kevesebb szer tudunk érvelni a saját véleményünk mellett és több az igen-igen, nem-nem-es válasz, amiben nem fejtjük ki, hogy miért gondoljuk azt”

222 „kötelezővé tehetnétek a körönkénti vitázást”

Habermas's concept of sincerity, it concerns whether exchanges are authentic and personally meaningful, or distorted by competition, conformity pressure, or strategic gameplay. ↔ See Sections 9.4.2.2 and 10.1.3.9.

In **Tactic Card**, authentic expression was often undermined during the *opinion clash*, where players signaled yes/no stances and scores rewarded consensus. Students frequently adjusted their answers to align with teammates, prioritizing points over expressing their real opinions. As one participant put it, “because of the teams it was overly competitive; participants focused more on collecting pieces than on expressing their opinions or engaging in reasonable debate. I think if it were one-on-one, or if each team had only one person, it would be a bit more genuine.”²²³ (T21_20151215).

The team-based structure shifted attention from authentic expression to point-maximizing strategies. These dynamics show that mechanics designed to reward consensus (→ see **Scoring System**) in **Step 2** risk systematically undermining sincerity.

9.4.2.3 Interaction Choice

Definition: Interaction choice refers to whether players have autonomy to engage in interactions. Games may offer moments of player choice or enforce participation through turn-taking or chance-based triggers. This design decision shapes agency, pacing, and the quality of small-group communication. ↔ See Sections 6.4.2.3, 8.4.5.1, 9.4.2.3, and 10.1.1.9.

In **Tactic Card**, interaction was mediated through debate cards, giving the questioning team autonomy to escalate *opinion clashes* into structured discussions. This mechanic aimed to increase agency by allowing players to decide when to engage more deeply and which topics to pursue.

In practice, however, interaction choices produced uneven outcomes. Some players strategically bypassed debate—delaying responses or mirroring opponents without using their debate cards (→ see **Tactical Dynamics**). This allowed them to avoid confrontation even when others sought engagement, creating a divide between passive and active participants.

Feedback confirmed these tensions. One player reflected, “I thought it [the game] was good and I enjoyed it, but there wasn't enough debate in it.”²²⁴ (T21_20151215). Others wanted more opportunities to argue: “There shouldn't be only one debate card, because then we had fewer chances to argue for our own opinions, and there were more ‘yes-yes’ and ‘no-no’ answers, where we don't explain why we think what we think.”²²⁵ (T21_20151215). Another suggest-

223 „a csapatok miatt túlzottan kompetitív volt, a résztvevők inkább hajtottak a darabok gyűjtésére, mint a véleményük kifejtésére, ésszerű vitázásra. Szerintem ha 1-1 ellen lenne, vagy a csapatokban csak 1 ember lenne, kicsit őszintébb lenne.”

224 „Szerintem jó volt [a játék], és élveztem, csak kevés volt benne a vita”

225 „ne csak egy vita kártya legyen, mert így kevesebbszer tudtunk érvelni a saját véleményünk mellett és több az „igen-igen”, „nem-nem” válasz, amiben nem fejtjük ki, hogy miért gondoljuk azt.”

ed enriching the mechanic: “[...] the debate card could have an additional option to make it more exciting.”²²⁶ (T21_20151215).

These observations highlight a design tension: while voluntary interaction empowers players (→ see **Player Engagement**), it can also enable avoidance.

9.4.2.4 Symbolism in Gameplay

Definition: Symbolism in gameplay refers to the implicit messages embedded in a game’s terminology, mechanics, and visual cues. These symbolic elements shape how players interpret rules, roles, and outcomes—guiding communication toward competition, cooperation, or deliberation. ↔ See Sections 7.4.4.4, 7.4.5.1, 8.4.7.2, 9.4.2.4, 9.4.5.2, and 10.1.2.9.

During the early development of **Tactic Card**, a discussion-enabling card was initially referred to as *stuka*: “there are stuka cards that allow players to talk through questions when they don’t agree”²²⁷ (M15_20150905). Intended to encourage dialogue, the term carried unintended connotations. *Stuka* referred both to the German *STUrzKAmppflugzeug* dive bomber and, in Budapest slang, to a tram nicknamed for its noisy, dive-bomber-like sound (BKV Zrt., 2006). These associations reframed the mechanic as combative rather than deliberative, encouraging confrontation instead of discussion.

The card was therefore renamed debate card. Although still somewhat conflict-heavy in Hungarian, the new name better aligned with the game’s purpose, illustrating how symbolic terminology can shape interaction—steering whether communication feels competitive or cooperative.

9.4.3 Step 3: Structured Debate

In **Step 3: Structured Debate** (Fig. 9.4), communication shifts from binary gestures to moderated dialogue led by the facilitator. Teams move from signaling a stance to verbally justifying it, while the facilitator ensures balance and structure. Because all players may join, the communication zone expands to the entire game space (turquoise background).

Snapshot 3.1 shows the turquoise questioning team playing a debate card, escalating the round into discussion for more points.

Snapshot 3.2 captures the facilitator moderating the exchange, drawing on the positions already expressed in **Step 2** (“yes” or “no” Y/N) and calling for a yes-position argument (black broadcast symbol).

Snapshot 3.3 shows a turquoise team member presenting the no argument (white broadcast symbol with N).

Snapshot 3.4 illustrates the facilitator’s follow-up, inviting a counterargument to maintain symmetry (black broadcast symbol).

²²⁶ „[...] lehetne a vita kártyán még valamilyen más opció, hogy izgalmasabb legyen.”

²²⁷ „vannak stuka kártyák, amelyekkel nem egyezés esetén meg lehet beszélni a kérdéseket”

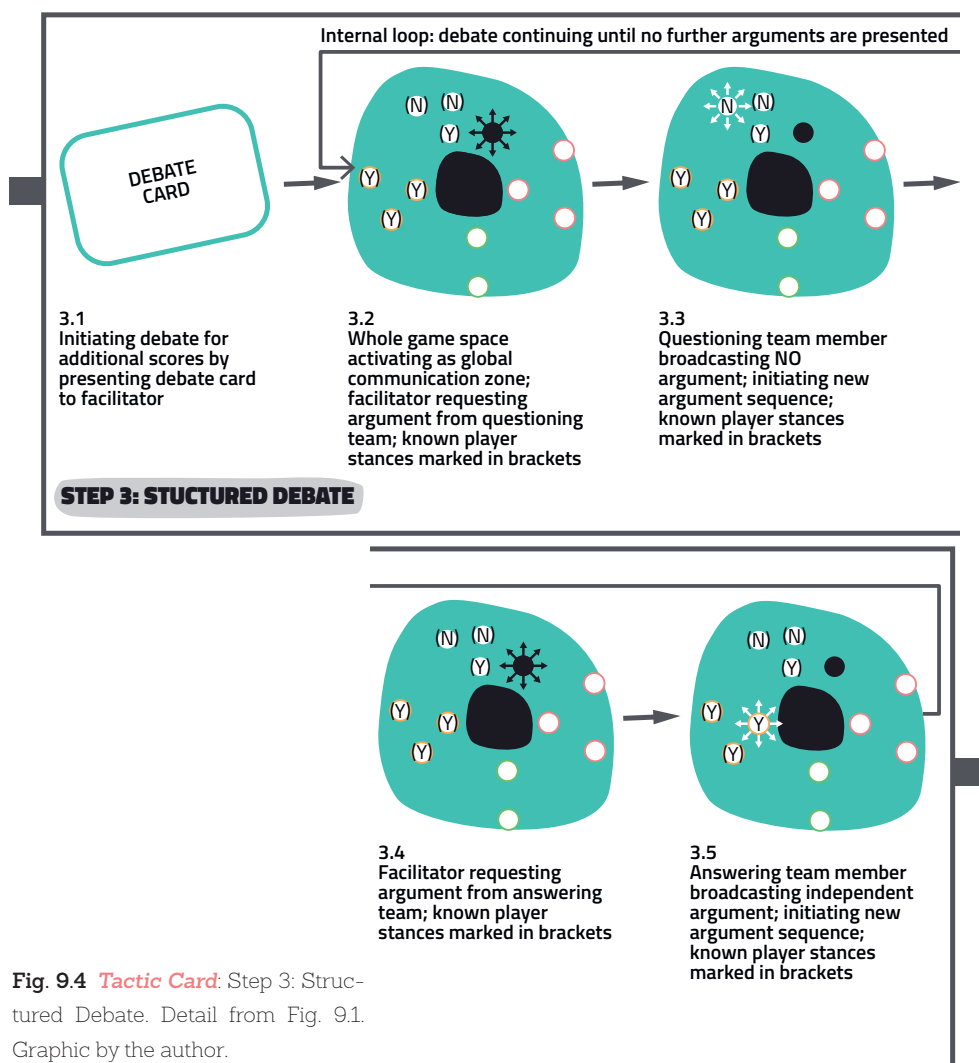


Fig. 9.4 Tactic Card: Step 3: Structured Debate. Detail from Fig. 9.1. Graphic by the author.

Snapshot 3.5 depicts an orange team member voicing the yes argument (white broadcast symbol with Y), fulfilling the minimum requirement of one contribution from each side.

At this stage, the facilitator plays a central role—moderating turn-taking, prompting contrasting perspectives, and maintaining inclusive dialogue. Gameplay revealed distinct patterns across age groups: adults tended to engage earnestly, treating debates as spaces for reasoned exchange, while adolescents often used arguments tactically—less to deliberate than to maximize scoring.

The following thematic analysis highlights factors that shaped *structured debate* in adult and adolescent groups.

9.4.3.1 Debate of Adults

This section presents observations and insights from playtests with adult participants, highlighting key factors influencing communication within these groups.

9.4.3.1.1 Landscape Pulse (Communication Topic)

Definition: Landscape pulses—also referred to as communication topics—are short prompts (e.g., questions, statements, or scenarios) that introduce a theme for discussion and shape small-group interaction toward dialogue, problem-solving, or decision-making. ↔ See Sections 6.4.3.1, 7.4.4.3, 8.4.4.1, 9.4.3.1.1, 9.4.3.2.4, and 10.1.1.2.

In *Tactic Card*, the *timeliness* of pulses—how closely a prompt resonated with current events or conditions—proved decisive for adult engagement (T15_20150813). When questions reflected contemporary issues, discussions became more intense and wide-ranging.

At *Mind the Game II* (T16_20151009; kultúrAktív Egyesület, 2015, December 12; Mindspace, n.d.), the pulse *Do you think it serves the public good when renovated public parks are fenced in and closed at night?*²²⁸ sparked heated debate. Participants linked the topic to Hungary's border fortifications during the refugee crisis (Open Society Foundations, 2015, September 30), reframing the issue from park management to the symbolic meaning of fences—as markers of exclusion and control.

A similar effect appeared at the *Make Europe Yours!* conference (Pillar Alapítvány, 2016, June 3), when heightened police presence after the Brussels bombings (MTI, 2016, March 22) influenced responses to a pulse on urban policing. As one facilitator recalled, “Several participants had come from the countryside, and when they stepped out of the metro, they were surprised by the heightened police presence. It turned out that the sight of patrol cars is reassuring for them there, while the heightened readiness they encountered in Budapest was distinctly unsettling, because it signals that there must be something to fear.”²²⁹ (kultúrAktív Egyesület, 2017, April 22).

These cases confirm that *timely, context-sensitive* pulses—those that align with participants' lived experience—create stronger engagement and richer reflection. As one facilitator noted, “Current, real-life issues are what get people engaged.”²³⁰ (ST2_20160324).

9.4.3.1.2 NEW! Landscape Experience

Definition: Players' landscape experience refers to how their socially and culturally shaped understandings of landscape—what they know, value, and have learned to notice about places—inform how they interpret and communicate about landscape issues during gameplay. The concept draws on social constructivist landscape theory, which views landscapes not merely as

228 „Szerinted a közösség javát szolgálja, hogy a megújuló közparkokat körbekerítik és bezárják éjszakára?”

229 „Többen vidékről érkeztek és a metróból kilépve meglepődve tapasztalták a fokozott rendőri jelenlétet. És kiderült, hogy számukra a járőr autók látványa megnyugtató, míg a Budapesten tapasztalt készenlét kifejezetten nyugtalanító, mert azt üzeni, hogy valamitől tartani kell.”

230 „Az aktuális kérdések mozgatják meg az embereket.”

physical settings but as shared cultural constructions shaped by use, memory, and meaning. ↔ See Sections 9.4.3.1.2 and 10.1.3.1.

In **Tactic Card**, debates were consistently framed through personal narratives: “they talk about their own experiences and personal stories.”²³¹ (T19_20151203). At *Mind the Game II* (T16_20151009; kultúrAktív Egyesület, 2015, December 12; Mindspace, n.d.), the pulse on fencing public parks at night elicited diverse interpretations: gardeners valued fences for protecting tools, parents for restricting dogs, while others emphasized the openness of public space (→ see **Player Affiliation**). Some reframed the issue symbolically: “The topic triggered an intense debate... Some participants had already set up community gardens, and when there was no fence, tools left out in the open tended to disappear. Parents with small children were happy that dogs could not get close to the playground this way, while others preferred open public spaces. Someone argued that fences don’t solve anything, because the real problem is their symbolic meaning. According to this view, the focus should be on education—if that is addressed, every problem can be solved.”²³² (kultúrAktív Egyesület, 2015, December 12).

At *Make Europe Yours!* conference (Pillar Alapítvány, 2016, June 3), heightened policing after the Brussels bombings (MTI, 2016, March 22) again produced divergent views: urban residents accustomed to patrols found them reassuring, while rural participants found them unsettling (→ see **Player Residency**). As one facilitator summarized, “Their response depends heavily on their personal experience—for example, whether they use the metro or not.”²³³ (ST2_20160324).

These findings show that landscape experience is not merely background context but an active resource of meaning-making, shaping arguments and influencing how collective interpretations are stabilized or contested.

9.4.3.1.3 NEW! Communication Objective

Definition: Communication objectives define the kind of interaction a game aims to foster—such as debate, persuasion, negotiation, or shared understanding. These goals shape how players engage, what counts as success, and how communication unfolds. ↔ See Sections 9.4.3.1.3 and 10.1.1.1.

In **Tactic Card**, the importance of communication objectives became clearly visible. The development team described the game’s purpose in multiple, shifting ways:

231 „saját tapasztalataikról, élményeikről beszélgetnek.”

232 „A felvetésre heves vita alakult ki... Voltak, akik már alapítottak közösségi kertet, és amíg nem volt kerítés, a szabadon hagyott eszközök el-el tűnedezték. A kisgyerekes anyukák örültek, hogy a kutyák így nem mehetnek a játszótér közelébe, mások a nyitott köztereket preferálták. Volt olyan is, aki szerint a kerítés nem old meg semmit, ugyanis annak szimbolikus jelentésével van a gond. A nevelésre kell helyezni a hangsúlyt, így minden probléma megoldható.”

233 „Nagyon függ az élménytől, hogy hogyan reagálnak a kérdésre. Pl. hogy metróval közlekedik-e valaki vagy sem.”

- “Our goal was to create a game capable of representing many different perspectives and sparking dialogue about how urban spaces are used, their quality, and the forms of participation involved.”²³⁴ (Tóth & Szilágyi-Nagy, 2015, October 9)
- “The idea is to spark debate; the method is dialogue”²³⁵ (Szilágyi-Nagy & Zajacz, 2015, November 28)
- “competence development happens through listening to one another.”²³⁶ (Szilágyi-Nagy & Gyárfás, 2015, December 10)

Other framings emphasized “developing communication skills: argumentation, forming opinions, dialogue”²³⁷ (Szilágyi-Nagy & Gyárfás, 2015, December 10) or “acceptance, openness, self-expression, and forming one’s own opinions [...]”²³⁸ and the need to “we can learn to accept others’ opinions and to shift perspectives”²³⁹ (Szilágyi-Nagy & Gyárfás, 2015, December 10). These variations revealed that no single communication objective was firmly anchored in the mechanics.

Playtests highlighted the effects of this ambiguity. At *JátékosNap* (Gameful-Day, T18_20151128; E_20151201), a novice facilitator joined as a player. After an *opinion clash*, she assumed agreement with her teammate—only to discover during the debate that they disagreed and felt closer to a player from the opposing team. This showed how the *opinion clash* often produced only the illusion of consensus: forced stance-taking masked deeper disagreements.

Looking back at earlier prototypes shows how communication goals had already varied in practice. **Clash** emphasized opinion expression but rewarded alignment, encouraging conformity. **Rulebook** and **Indoor Parliament** introduced persuasion, where *defense speeches* and point allocation favored influencing others. **Street Parliament** was the first to explicitly target deliberation. **Tactic Dice** enabled strategic alignment by letting players adjust their stance after debates, yet still prioritized consensus through scoring. Each prototype thus pushed interaction in a specific direction—even when objectives were not clearly defined.

This lack of clarity also resonated across other factors. **Tactical Dynamics** showed students avoiding debate for quick consensus. **Interaction Choice** allowed players to bypass deeper engagement. **Player Engagement** diverged: some enjoyed argumentation, others preferred avoidance. Without clearly defined objectives, these dynamics reinforced surface agreement over deliberation.

9.4.3.1.4 NEW! Ideal Conditions

Definition: Ideal conditions refer to the communicative circumstances under

234 „Célunk egy olyan játék létrehozása volt, amely képes sokféle szempontot képviselni, és párbeszédet indít a városi terek használatáról, minőségéről, és a részvétel formáiról”

235 „Az ötlet a vitaindítás, a módszer a párbeszéd”

236 „egymás meghallgatása által történik a kompetencia fejlesztés.”

237 „kommunikációs képességek fejlesztése: érvelés, véleményalkotás, párbeszéd.”

238 „befogadás, nyitottság, önkifejezés és véleményalkotás [...]”

239 „megtanulhatjuk mások véleményének elfogadását, a nézőpont váltást.”

which participants can reach mutual understanding and, when appropriate, consensus. Following the Habermasian notion of “ideal speech,” such conditions emerge when players feel psychologically safe, have sufficient time, and can exchange views free from pressure or hierarchy. Under these circumstances, they listen attentively, reconsider positions, and co-create shared or creative outcomes. ↔ See Sections 9.4.3.1.4 and 10.1.2.8.

In **Tactic Card**, shared understanding appeared as a central but fragile objective (→ see **Communication Objective**). While not always achieved (T18_20151128), some sessions showed players moving beyond binary stances to seek rational agreement (T19_20151203; T20_20151210).

At a game club session in Pécs (T19_20151203), participants rephrased a pulse on car-free days to make it acceptable to all: “When the teams disagreed, they started looking for consensus [...] they began to rephrase the card’s statement so that it would work for everyone. For example, I remember the question: ‘Would you like a car-free day once a week?’ There were yeses and nos. The ‘no’ side argued: what about patients, delivery services, the postal workers, etc.? The ‘yes’ side responded: okay, that’s true—so let’s allow exceptions, like a car-free day except for ambulances, mail delivery, etc. Everyone agreed on this. Similar situations happened several times.”²⁴⁰ (E_20151212).

At the *Design Meetup* conference (T20_20151210), a discussion on community-sharing of sewing machines also moved toward consensus. After debating issues of attachment, cost, and practicality, players concluded that “everyone has some personal item they would be willing to share with others”²⁴¹ (kultúrAktív Egyesület, 2016, February 6).

Yet these moments were not structurally rewarded. As one facilitator reflected, “But the game doesn’t reward consensus, because at the end of the debate you still have to read out the original question again and decide whether you agree or disagree with that. In those moments I feel like the whole point gets lost.”²⁴² (E_20151212).

These observations show that while ideal conditions occasionally emerged, they relied on external factors such as time (→ see **Game Duration**), comfort (→ see **Ambient Conditions**), facilitation, and willingness to reframe positions. The game’s mechanics themselves did not secure them.

240 „A csapatok egyet nem értés esetén elkezdtek konszenzust keresni [...] elkezdtek úgy átfogalmazni a kártya állításait, hogy az mindenkinek megfeleljen (például, arra emlékszem, [...] hogy: akarsz-e autómentes egy napot a héten? Voltak igenek és nemek. A nemek azzal érveltek, hogy hát mi lesz a betegekkel, a szállítókkal, a postával stb. Erre azt mondták az igenek, hogy jó, az igaz, akkor legyenek kivételek, hogy pl. autómentes nap, kivéve mentő, posta stb. Ebben mindenki meg egyezett. Ehhez hasonló eset többször előfordult.”

241 „mindenkinek van olyan személyes tárgya, amit megosztana mással”

242 „De a konszenzust nem jutalmazza a játék, mert ilyenkor a vita végén ismét az eredeti kérdést kell felolvasni, és azzal egyetérteni, vagy nem érteni egyet. Ilyenkor kicsit úgy érzem, hogy pont a lényeg veszett el.”

9.4.3.2 Debate of Adolescents

This section examines how high school students engaged in *structured debate*, drawing on observations and post-game questionnaires to identify their strategies, themes, and experiences of the discussion process.

9.4.3.2.1 Player Engagement

Definition: Player engagement is the emotional and cognitive investment that draws participants into play. It grows through curiosity, anticipation, and the shared making of meaning—conditions that determine how actively and authentically players contribute to small-group communication. ↔ See Sections 6.4.2.1, 7.4.4.9, 7.4.6.2, 8.4.3.2, 9.4.3.2.1, and 10.1.3.8.

In **Tactic Card**, adolescents found their greatest excitement in debating, expressing opinions, and defending viewpoints (T21_20151215; T22_20160123). Although debates occurred infrequently (→ see **Interaction Choice**), when they did, they left a strong impression. As one facilitator noted, “The few debates that did happen were really interesting—both the debaters and the other participants enjoyed them a lot.”²⁴³ (T21_20151215).

Motivation and attentiveness were consistently high: “For me it was a really positive experience, because the participants were motivated, approached the game enthusiastically, and paid attention to one another”²⁴⁴ (T21_20151215).

Students repeatedly identified *argumentation* as the most enjoyable aspect of the game:

- “The best part of the game was the arguments—they were exciting, and they were interesting to listen to. You could laugh a bit, too, and because of their material, the cards were nice to hold.”²⁴⁵ (T21_20151215)
- “What I enjoyed most about the game was that everyone could express their own opinion, and we learned a lot about the city while playing.”²⁴⁶ (T22_20160123)
- “I liked it because the game was genuinely interested in our own opinions.”²⁴⁷ (T21_20151215)
- “It was good that we could stand up for what we believed in, that we could decide the fate of a city.”²⁴⁸ (T21_20151215)

243 „Az a pár vita viszont nagyon érdekes volt, mind a vitázók, mind a többi résztvevő nagyon élvezte őket.”

244 „Számomra nagyon jó élmény volt, mert a résztvevők motiváltak voltak, lelkesen álltak a játékhoz, és figyelték egymásra”

245 „A legjobb dolgok a játékban az érvelések voltak, mert izgalmas volt, és hallgatni is érdekes volt. Lehetett nevetni egy kicsit, a kártyákat pedig az anyaguk miatt jó volt fogdosni.”

246 „Azt élveztem leginkább a játékban, hogy mindenki kinyilváníthatta a saját véleményét és játék közben sok mindent tanultunk a várossal kapcsolatban”

247 „Nekem tetszett, mert a saját véleményünkre volt kíváncsi a játék.”

248 „Jó volt benne, hogy kiállhattunk az igazunkért, mi dönthettünk egy város sorsáról is”

Excitement also came from role reversal, as students argued for positions they initially disagreed with: “what I enjoyed most was being able to argue for things I hadn’t agreed with before”²⁴⁹ (T22_20160123).

Finally, influencing peers and testing persuasiveness proved deeply engaging: “We could explain our opinions, argue for them, and see whom we managed to convince and whom not; we also learned what the others thought about some not-everyday questions”²⁵⁰ (T22_20160123).

These observations confirm that, for adolescents, debate, self-expression, and persuasion were primary sources of excitement. Like adults, they valued articulating and defending opinions, but their enthusiasm was also heightened by experimenting with unfamiliar perspectives and testing their influence on peers.

9.4.3.2.2 Player Diversity

Definition: Player diversity refers to the range of social, cultural, and experiential backgrounds through which participants interpret and communicate about landscapes. From a social constructivist view, diversity expands the pool of meanings and narratives that can emerge, revealing how different groups construct and contest what a landscape represents or should become.
↔ See Sections 7.4.4.6, 9.4.3.2.2, and 10.1.3.6.

In **Tactic Card**, group composition had a clear influence on the quality of debate. School-based sessions were marked by homogeneity—students shared similar environments and experiences—which limited disagreement and reduced opportunities for deeper argumentation. As one game leader observed: “Players rarely got into debates—either because the questions weren’t divisive enough, or because the group was too homogeneous for people to think differently about a given issue.”²⁵¹ (T21_20151215).

With fewer contrasting perspectives in play, debates often ended quickly or converged on agreement. While this streamlined the game, it narrowed the discursive depth. These findings confirm that homogeneity can constrain discussion, whereas diversity in background and viewpoint tends to generate more dynamic and sustained exchanges.

9.4.3.2.3 NEW! Player Residency

Definition: Player residency describes how people’s living environments shape their understanding and communication about landscapes. Where players live—urban, suburban, or rural—influences what they notice, value,

249 „én azt élveztem leginkább, hogy tudtam olyan dolgok mellett érvelni, amivel addig nem értettem egyet”

250 „Ki lehetett fejteni a véleményünket, és a mellett érvelni, és láhattuk, hogy kit sikerült meggyőzni az érveinkkel és kit nem, a többiek véleményét is megismertük egy-egy nem mindennapi kérdéssel kapcsolatban”

251 „A játékosok ritkán szálltak vitába, vagy azért, mert nem volt elég megosztóak a kérdések, vagy azért, mert túlságosan azonos volt a közeg, hogy másként gondolkodjanak egy-egy kérdésről”

and consider relevant in landscape discussions. This reflects their interpretive social landscape: the socially and culturally learned meanings, emotions, and norms that guide how they read and talk about space. Residency therefore conditions which landscape issues feel pressing and how players position themselves within dialogue. ↔ See Sections 9.4.3.2.3 and 10.1.3.3.

Testing **Tactic Card** with students outside Budapest (T21_20151215; T22_20160123) first revealed the significance of this factor. Some participants found the questions too capital-focused, which limited engagement: “The students feel the questions are specific to Budapest”²⁵² (T22_20160123). Another added, “I only [think about these kinds of questions] when I’m in Budapest”²⁵³ (T22_20160123). This demonstrated how residency directly shaped the perceived relevance of topics.

Earlier sessions reinforced this pattern. In **Parliament** at the *OFF-Biennale Budapest* (T6_20150517) facilitators noted contrasting arguments: city residents emphasized social and infrastructural concerns, while suburban players focused on spatial planning and economic issues—“I really appreciated the diversity of arguments and reactions stemming from different contexts—for instance, the contrast between perspectives from the capital and the metropolitan periphery, or between social and economic reasoning.”²⁵⁴ (T6_20150517). Similarly, at the *Make Europe Yours!* conference (Pillar Alapítvány, 2016, June 3), regional backgrounds shaped debates on police presence after the Brussels bombings: “For those who live in Budapest, [their sense of safety] didn’t increase; for those from the countryside, police presence matters. The two groups simply aren’t the same”²⁵⁵ (ST2_20160324).

These insights informed later **Tactic Card** sessions. Question sets were increasingly tailored to participants’ geographic realities, with facilitators emphasizing “locally relevant issues”²⁵⁶ (T29_20160618). For example, a session in Törökbálint foregrounded suburban concerns to better match participants’ experiences (T29_20160618).

Recognizing player residency as a key factor clarified how geographic context shapes engagement, relevance, and the interpretive process of small-group communication.

9.4.3.2.4 Landscape Pulse (Communication Topic)

Definition: Landscape pulses—also referred to as communication topics—are short prompts (e.g., questions, statements, or scenarios) that introduce

252 „Úgy érzi [a diák], hogy a kérdések Budapest-specifikusak”

253 „Én csak akkor [gondolkodom ilyen kérdéseken], ha Budapesten járok”

254 „Nagyon tetszettek a különböző kontextusból érkező reakciók és érvek: pl. fővárosi és agglomerációs érvek közötti különbség, társadalmi és gazdasági érvek.”

255 „Akik Pesten laknak, azoknak nem nőtt [a biztonság érzetük], akik vidéken, nekik számít a rendőri jelenlét. Nem ugyanaz a típus [a két csoport].”

256 „helyi érdekeltségű témák”

a theme for discussion and shape small-group interaction toward dialogue, problem-solving, or decision-making. ↔ See Sections 6.4.3.1, 7.4.4.3, 8.4.4.1, 9.4.3.1.1, 9.4.3.2.4, and 10.1.1.2.

Observations in **Tactic Card** showed that two aspects of the landscape pulse—*relevance* and *presentation*—significantly shaped how discussion unfolded and how inclusive debates became:

Relevance (how meaningful the pulse is to participants' own lives) proved decisive in determining engagement. Some pulses triggered curiosity: "the topics were good, not everyday ones; they made me think about these issues"²⁵⁷ (T21_20151215), or opened access to unfamiliar issues: "We learned about interesting environmental solutions that, I think, we had never even heard of before"²⁵⁸ (T21_20151215). Teachers valued this effect: "The children were able to pay close attention to one another, everyone had a chance to speak, and we touched on topics the students otherwise wouldn't have heard about."²⁵⁹ (T21_20151215). Yet disengagement emerged when topics felt distant: "A teenager isn't interested in these topics"²⁶⁰ (T21_20151215). By contrast, locally resonant questions—such as skyscraper construction in Gödöllő—sparked dynamic debates mixing economic, social, and spatial concerns (T21_20151215). Students reflected on how abstract topics gained meaning once tied to everyday life:

- "The topics seemed unusual, and by the end we realized that these are everyday problems in our lives"²⁶¹ (T21_20151215)
- "It made people aware of things that surround them but that they simply don't notice in their everyday lives."²⁶² (T21_20151215)
- "The topics were interesting, mostly because we encounter these things every day—we just don't think about them, even though we should"²⁶³ (T21_20151215)
- "It was good to debate and argue about something that normally wouldn't come up in everyday conversations"²⁶⁴ (T22_20160123)

257 „témák jók voltak, nem mindennapiak, elgondolkoztatott ezekkel a dolgokkal kapcsolatban”

258 „Érdekes környezetvédő megoldásokat ismerhettünk meg szerintem, amikről azelőtt még csak nem is hallottunk”

259 „aktívan tudtak egymásra figyelni a gyerekek, mindenki szót kapott, és olyan témákról esett szó, amikről egyébként nem hallottak volna a diákok.”

260 „Egy tizenévest ezek a témák nem érdeklik”

261 „Különleges témáknak tűntek, és a végén rájöttünk, hogy ezek mindennapos problémák életünkben”

262 „Rávilágította az embereket pár olyan dologra, ami körbeveszi őket, de mégse veszik észre őket a mindennapokban.”

263 „A témák is érdekesek voltak, főleg azért, mert ezekkel a dolgokkal mindennap találkozunk, csak nem foglalkozunk velük, pedig kellene”

264 „Jó volt olyanról vitázni, érvelni, ami egy nem mindennapi beszélgetés tárgya”

Presentation (how clearly and simply the question is phrased) also shaped accessibility (E_20150815a). The clarity of phrasing strongly influenced accessibility (E_20150815a). Long or complex texts disrupted focus: “The texts were too complicated and difficult to understand”²⁶⁵ (T21_20151215); “Maybe shortening the questions would be better, because by the time they were finished, we suddenly couldn’t remember how they started.”²⁶⁶ (T21_20151215). Facilitators confirmed: “There were several occasions when the group struggled to understand the question. These also required additional explanation.”²⁶⁷ (T22_20160123). By contrast, concise and well-structured questions boosted engagement: “With the questions that were phrased more simply, it was easier to argue, and these were generally closer to us, the students.”²⁶⁸ (T22_20160123). As a result, questions were rewritten to prioritize clarity, brevity, and accessible language—ensuring that everyone could follow and contribute. For adolescent groups especially, *accessible and locally resonant* pulses proved essential to sustain argumentation and shared reflection.

9.4.4 Step 4: Voting

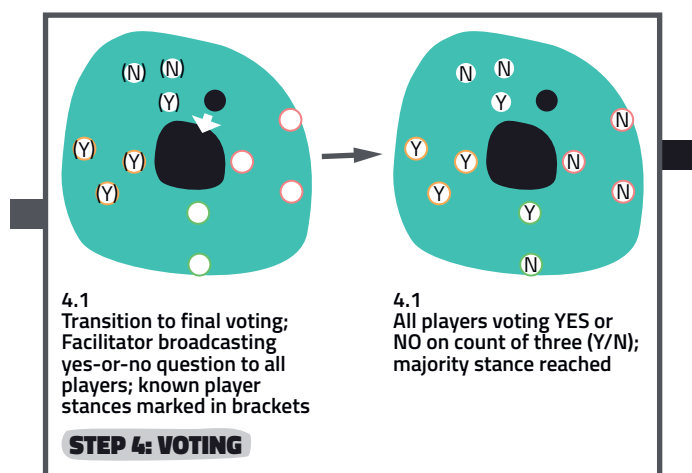


Fig. 9.5 Tactic Card:
Step 4: Voting. Detail
from Fig. 9.1. Graphic by
the author.

In **Step 4: Voting** (Fig. 9.5), *structured debate* culminates in a collective decision. The communication zone widens to include all players, transforming previously separate exchanges into a shared closure.

Snapshot 4.1 shows the facilitator reposting the question (sending the pulse), initiating the final round.

265 „A szövegek túl bonyolultak, nehezen értelmezhetőek voltak”

266 „Esetleg a kérdések lerövidítése lenne jobb, mert mire befejeződtek, már nem tudtuk az elejét hirtelen.”

267 „Volt több ízben olyan is, amikor a kérdés megértése okozott nehézséget a csoport nagyobb részének. Itt is plusz magyarázatra volt szükség.”

268 „Azoknál a kérdéseknél, ami egyszerűen volt kifejtve, könnyen lehetett érvelni, ezek általában közelebb is álltak hozzánk, dákokhoz”

Snapshot 4.2 depicts the ritualized vote: on the count of three, players simultaneously express their stance—raising a hand for “yes” (Y) or squatting for “no” (N). The entire play area (turquoise zone) becomes active as every participant takes part in the decision-making process. The outcome determines the questioning team’s score in the **Final Step**.

At this stage, communication is both inclusive and condensed. Every player has an equal voice, yet deliberation is compressed into a binary outcome. What began as an *opinion clash* and *structured debate* concludes in a moment of collective judgment, providing closure before the city’s construction phase.

9.4.5 Final Step: Constructing with Consensus & Debate

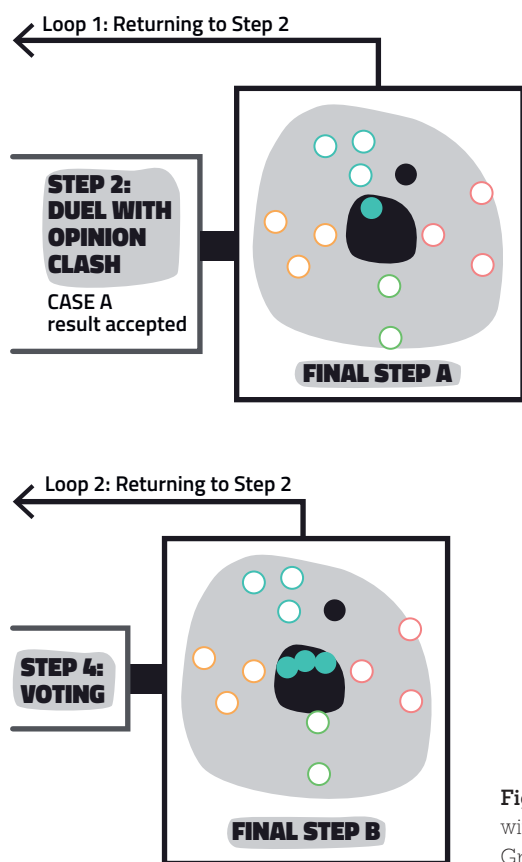


Fig. 9.6 Tactic Card: Final Step: Constructing with Consensus & Debate. Detail from Fig. 9.1. Graphic by the author.

The **Final Step: Constructing with Consensus & Debate** translates earlier interactions—*opinion duels*, *structured debates*, and votes—into tangible form on the shared city board. While verbal exchange recedes, previous arguments materialize as magnetic building pieces, turning communication into visible construction.

Fig. 9.6 shows two distinct construction pathways:

- The first row shows **Final Step A: Construction with Consensus**, stemming from **Step 2: Opinion Duel Between Teams**. When the questioning team accepts the result of the *opinion clash*, points are awarded based on the level of agreement—2 for full consensus, 1 for majority, 0 for tie or minority—and immediately placed on the team's thematic building.
- The second row shows **Final Step B: Construction with Debate**, following **Step 4: Voting**. If the questioning team challenges the duel result by playing a debate card, the round continues through *structured debate* and *collective voting*. Scores depend on the level of majority support for the questioning team's stance, typically between 0–4 points.

Across these two pathways, construction functions as both closure and reflection—revealing how different decision logics translate into collective form. In **Tactic Card**, a city may be built through quick consensus (**Final Step A**) or extended deliberation (**Final Step B**), each leaving a distinct communicative imprint on the evolving cityscape.

9.4.5.1 Scoring System

Definition: Scoring systems are the mechanics that reward player actions and track progress. They shape how participants perceive success and steer communication toward specific dynamics—such as competition, cooperation, or consensus—depending on how outcomes are incentivized. ↔ See Sections 6.4.4.1, 7.4.6.1, 8.4.7.1, 9.4.5.1, and 10.1.1.11.

In **Tactic Card**, the scoring system translated discussion outcomes into construction moves. It aimed to reward deliberation and argumentation (→ see **Communication Objectives**)—"the diversity of viewpoints and the unexpected twists in arguments are what give the game its essence! Everyone feels it: your opinion matters!"²⁶⁹ (Építészforum, 2016, February 8)—and to visualize "a fictional city that develops and grows through the players' opinions."²⁷⁰ (Tóth & Szilágyi-Nagy, 2015, October 9). Players appreciated this: "The players enjoyed taking part in a game where they could finally express their opinions freely, learn about others' perspectives, and where the outcome depended not on chance but on their reasoning—the decision was in their hands."²⁷¹ (Építészforum, 2016, February 8).

In practice, however, the scoring mechanics strongly incentivized consensus-seeking. Unanimous agreement with the questioning team's stance yielded four points, majority support three, while ties produced no points at all. By rewarding alignment and penalizing deadlock, the rules discouraged sustained disagreement and pushed players toward strategic voting or surface-level agreement.

269 „a nézőpontok különbözősége és az érvelés váratlan fordulatai adják a játék esszenciáját! Mindenki érzi: számít a véleményed!"

270 „egy olyan fiktív város, mely a játékosok véleményén keresztül fejlődik és épül"

271 „A játékosok élvezték, hogy végre egy olyan játékban vehetnek részt, amelyben szabadon kifejezhetik a véleményüket, megismerhetik mások szempontjait, és a végeredményben nem a véletlennek van a legnagyobb szerepe, hanem érvelésüknek – kezükben a döntés."

Frequent ties in even-numbered teams further disrupted flow: “There could be a rule that only an odd number of players can play, to avoid tied debates.”²⁷² (T21_20151215). Because scoring privileged consensus, the intended goal of deliberation was undermined. Players often focused more on debating itself than on the outcome: “Precisely for this reason [...] everyone focuses only on the debate—which does work well. But on its own, it’s still not a game. So it would need some kind of playful structure that immediately gives function to the other elements as well.”²⁷³ (E_20151212).

In short, while the scoring system sought to support deliberation, its mechanics mechanically rewarded consensus. This tension between communicative aims (→ see **Communication Objectives**) and rule-based incentives revealed a central paradox of **Tactic Card**: that scoring designed to reward agreement can, paradoxically, mask disagreement and constrain deliberation.

9.4.5.2 Symbolism in Gameplay

Definition: Symbolism in gameplay refers to the implicit messages embedded in a game’s terminology, mechanics, and visual cues. These symbolic elements shape how players interpret rules, roles, and outcomes—guiding communication toward competition, cooperation, or deliberation. ↔ See Sections 7.4.4.4, 7.4.5.1, 8.4.7.2, 9.4.2.4, 9.4.5.2, and 10.1.2.9.

Beyond its mechanics, the scoring system of **Tactic Card** carried strong symbolic meaning (→ see **Scoring System**) also carried strong symbolic meaning. The original design framed argumentation as the city’s building force—“a fictional city that develops and grows through the players’ opinions”²⁷⁴ (Tóth & Szilágyi-Nagy, 2015, October 9). During playtests, however, this message gradually shifted: city-building became equated with consensus. A later rulebook stated, “The goal is for the city to be built and developed with as much agreement and shared values as possible.”²⁷⁵ (T19_20151203), and further emphasized, “The emphasis is on agreeing with the other players, because the more people agree on a given topic, the more the city can be built. That way they earn more building elements.”²⁷⁶ (T19_20151203).

This reframing raised critical questions among facilitators: “Is the real goal that the city should develop along shared values? Do we really want to create homogeneous cities?”²⁷⁷ (T19_20151203); and “I also have a principled problem

272 „Lehetne olyan szabály, hogy csak páratlan számú játékos játszhat, a döntetlen viták elkerülése végett.”

273 „Éppen ezért [...] mindenki csak a vitára koncentrál – ami viszont jól működik. De önmagában még nem játék. Úgyhogy kellene bele valami játékos struktúra, ami mindjárt funkciót ad a többi elemnek is.”

274 „egy olyan fiktív város, mely a játékosok véleményén keresztül fejlődik és épül”

275 „A cél, hogy minél nagyobb egyetértésben és közös értékek mentén épüljön és fejlődjön a város.”

276 „A hangsúly a többi játékoskal való egyetértésen van, ugyanis annál nagyobb mértékben épülhet a város, minél többen értenek egyet egy adott témában. Így több építőelemet szereznek.”

277 „Tényleg az a cél, hogy közös értékek mentén fejlődjön a város? Tényleg homogén városokat akarunk létrehozni?”

with the idea that we award points for greater agreement. In an urban space—if we take the original meaning of ‘public space’—it should provide room for the expression of differing opinions. [...]”²⁷⁸ (E_20151212).

At the same time, the rapid pace of voting reduced debate to a largely symbolic gesture. As one participant reflected on the limits of deliberation in the voting phase: “[...] We can’t really say that the game rewards argumentation or convincing others, because there isn’t enough time for real reasoning; debate appears only in a compressed, almost symbolic form”²⁷⁹ (E_20151212).

In short, while **Tactic Card** aimed to symbolize argumentation as the foundation of city-making, its scoring system and phrasing instead conveyed consensus as the dominant civic value. The contrast between these two symbolic layers revealed how easily gameplay can unintentionally contradict its own deliberative intentions.

9.4.6 All Steps: Cultural Representation in Games

Definition: Cultural representation in games refers to how mechanics, roles, and interactions reflect or challenge societal values, norms, and power structures. Design choices—such as who speaks, how decisions are made, or what is rewarded—implicitly convey messages about authority, inclusion, and co-operation. ↔ See Sections 7.4.7, 8.4.8, 9.4.6, and 10.1.2.10.

In **Tactic Card**, cultural representation became especially visible in how the scoring system (→ see **Scoring System**) and its symbolism (→ see **Symbolism in Gameplay**) consistently privileged consensus over deliberation. By rewarding alignment and penalizing disagreement, the game risked symbolically promoting ideological uniformity rather than pluralism.

Designers expressed concern about this underlying message: “Is the real goal that the city should develop along shared values? Do we really want to create homogeneous cities?”²⁸⁰ (T19_20151203) and “Our goal cannot be that everyone thinks the same way, agrees with everyone else, and wants to build the city along shared values. Ideologies that push for uniform, homogeneous societies have never ended well in history.”²⁸¹ (E_20151212).

These reflections underscored how gameplay mechanics can reproduce broader cultural ideologies, even when the explicit aim is to support diversity

278 „Nekem azzal is problémám van elvi szinten, hogy miért azt pontozzuk, ha mindél nagyobb egyetértés van? Szerintem egy városi térben – ha a köztér eredeti jelentését vesszük alapul – akkor épp teret jel nyújtania a különböző vélemények megnyilvánulásának. [...]”

279 „[...] Azt sem igazán lehet mondani, hogy az érvelést díjazzuk, a többi játékos meggyőzését, mert igazából nincs elég idő az érvelésre, a vita csak sűrítve, inkább szimbolikusan van jelen.”

280 „Tényleg az a cél, hogy közös értékek mentén fejlődjön a város? Tényleg homogén városokat akarunk létrehozni?”

281 „a célunk szerintem nem lehet az, hogy mindenki ugyanúgy gondolkodjon, és mindenki mindenkivel egyetértsen és közös értékek mentén akarja építeni a várost, mert az ilyen uniformizáló, homogén társadalmakat érintő ideológiák sosem végződtek jól a történelemben.”

and dialogue. For the design team, the challenge became not only to revise the rules but to ensure that **Tactic Card** embodied a cultural vision aligned with deliberative ideals—encouraging difference and disagreement as constructive forces rather than masking them under the guise of harmony.

9.4.7 Facilitation Tasks

Fig. 9.1 illustrates how small-group communication unfolded in **Tactic Card**, where facilitators were not passive moderators but active co-creators of interaction. Unlike earlier prototypes, where facilitation remained implicit, the visual layout of the game explicitly represented the facilitator—underscoring their central role in structuring communication.

Thematic analysis showed that facilitators shaped how small-group dialogue unfolded: they adapted rules to group conditions, balanced participation, and ensured that discussions stayed accessible and meaningful. Their role extended beyond managing flow to interpreting and enacting the game's communicative objectives.

Two facilitation tasks emerged as particularly critical for small-group communication:

- **Adapting to Player Needs:** Modifying rules and formats to suit group size, composition, and setting.
- **Documenting and Sharing Insights:** Capturing and systematizing facilitation practices so that both experienced and new facilitators could apply them consistently.

The following sections explore these tasks in detail.

9.4.7.1 Adapting to Player Needs

Definition: Adapting to player needs refers to the facilitator's role in adjusting communication structures to match participants' backgrounds, capacities, and interaction styles—so everyone can participate meaningfully without losing the game's communicative intent. ↔ See Sections 7.4.8.2, 9.4.7.1, and 10.2.3.

In **Tactic Card**, facilitation was key to maintaining inclusivity and responsiveness. Designers emphasized flexibility as a guiding principle: “the essence of the game is that it keeps evolving; I think that's why it's important for everyone to try out new rules based on their own taste and ideas”²⁸² (E_20151201).

Several adaptations were tested to align gameplay with group conditions:

- *Adapting rule complexity:* Facilitators used simplified versions for outdoor play and more detailed versions for larger groups requiring structured facilitation.

²⁸² „a játék lényege, h[ogy] alakul, sztem ezért fontos, h[ogy] mindenki a maga ízlése és ötletei alapján próbálkozzon új szabályokkal”

- *Group scaling:* At *Gameful Day* (T18_20151128), groups of 1–6 players participated individually (→ see **Group Size**), while larger groups of 7–18 were divided into teams of 2–3 (→ see **Group Division**) to balance participation (E_20151201).
- *Adjusting debate structure:* Some sessions used debate cards to trigger structured exchanges, while others allowed free argumentation (E_20151201).

These adaptations helped facilitators sustain balanced communication across varied contexts. However, they also revealed a limitation: while experienced designers could improvise such changes easily, new facilitators often lacked the knowledge to do so—highlighting the need for systematic documentation and transfer of facilitation practices (→ see **Documenting and Sharing Insights**).

9.4.7.2 NEW! Documenting and Sharing Insights

Definition: Documenting and sharing insights refers to the facilitator’s role in recording, organizing, and transmitting facilitation strategies so others can adapt the game effectively and sustain inclusive communication. ↔ See Section 9.4.7.2 and 10.2.9.

Tactic Card revealed how strongly facilitation shaped communication—yet much of this knowledge remained tacit. Experienced facilitators improvised new rule variants and debate formats with ease, while newcomers often struggled to adapt in the same way. Because facilitation strategies typically emerged spontaneously in play, they were rarely formalized, which limited their transfer.

To address this, the design team began explicitly documenting alternative rules and adaptations. Two parallel rulebooks were produced: a short, accessible version for outdoor or mixed-background groups, and a detailed version for classroom or large-group settings. Testing at *Gameful Day* (T18_20151128) reinforced the need for such resources, as participants played in both small (individual) and large (team-based) formats. Without clear guidance, new facilitators found it difficult to reproduce these adjustments.

Recognizing documentation as a facilitation task in itself, the team worked to capture tested strategies in accessible formats. This systematization helped ensure balanced interaction, continuity across sessions, and inclusive small-group communication—whether led by designers or by facilitators encountering the game for the first time.

9.5 Social Constructivist Landscape Theory Analysis

This section interprets the **Tactic Card** prototype from the perspective of social constructivist landscape theory, focusing on how communicative interaction during gameplay contributed to the social construction of landscape meanings.

Two perspectives, as introduced in Section 4.4.2.3, are particularly helpful for orienting this interpretation: (1) the processes of landscape meaning-making

through communication (Section 9.5.1), and (2) the mediation of differentiated knowledge stocks shaped by landscape socialization (Section 9.5.2). From this perspective, the analysis examines how structured interaction, emotional engagement, and group composition shaped the emergence, negotiation, and provisional stabilization of shared landscape meanings during gameplay.

9.5.1 Processes of Landscape Meaning-Making through Communication

During gameplay, the **Tactic Card** prototype encouraged participants to articulate and negotiate landscape-related meanings through a sequence of communicative interactions. These interactions resonate with central ideas in social constructivist landscape theory, particularly Kühne's (2015b, p. 29) understanding of landscape construction and Berger and Luckmann's (1966) notion of meaning stabilization.

In the early stages of the game, participants formed teams around thematic questions (**Step 1: Teaming Up**). While no explicit landscape discussion occurred at this point, group composition already shaped subsequent communication by influencing the initial perspectives and experiences participants brought into later discussions. When two selected teams were confronted with a yes-or-no question (**Step 2: Opinion Duel Between Teams**), team members expressed preliminary positions that externalized individual perceptions and experiences related to the landscape topic at hand.

The subsequent debate phase (**Step 3: Structured Debate**) provided space for participants to justify, challenge, and reconsider these positions. Through structured turn-taking and argument exchange, meanings were negotiated and partially aligned within and across teams. Voting (**Step 4: Voting**) further condensed these negotiations by symbolically stabilizing certain interpretations, even when underlying disagreements remained. Finally, the collective construction phase translated negotiated positions into a shared spatial representation, giving material form to previously abstract arguments (**Step 5: Constructing with Consensus**).

Taken together, these communicative moments illustrate how landscape meanings were exchanged and gradually constructed, negotiated, and temporarily stabilized through interaction. The gameplay thus illustrates how key elements of meaning-making described in the literature can unfold in practice..

9.5.2 Mediation of Differentiated Knowledge Stocks through Game Structures

Tactic Card demonstrated how differentiated knowledge stocks—shaped by primary, secondary, and tertiary landscape socialization—were mediated through *structured debate* mechanics. Its turn-taking and debate cards created procedural openness for biographical experiences, professional expertise, and adolescent perspectives to surface. Whether and how these knowledges

were articulated depended on both general factors and age-related differences between adults and adolescents:

- **Step 1: Teaming Up:** Teams were formed voluntarily or by assignment. No landscape discussion occurred yet, but group composition set the stage (→ see **Player Diversity**). Homogeneous groups, especially among adolescents, tended to produce fewer debates, while mixed-age or mixed-background groups enabled more layered exchanges—even when the yes-or-no question itself was not particularly divisive (→ see **Landscape Pulse**). As one facilitator put it: “Players rarely got into debates—either because the questions weren’t divisive enough, or because the group was too homogeneous for people to think differently about a given issue.”²⁸³ (T21_20151215).
- **Step 2: Opinion Duel Between Teams:** Teams clashed over questions without requiring prior consensus. This allowed unresolved internal differences to surface, but expression was limited to binary yes/no stances (→ see **Communication Modes, Ritualized Expression**), flattening nuanced arguments into simplified alignments.
- **Step 3: Structured Debate:** If triggered by a debate card, this step created the richest space for knowledge articulation. Alternating turns ensured multiple voices entered discussion (→ see **Communication Rules**).
 - **Adults:** Often activated primary and secondary socialization (biographical experience) alongside *tertiary* expertise. In park-fencing debates, gardeners spoke of theft, parents emphasized safety, while others critiqued fences as exclusionary symbols and suggested education instead (kultúrAktív Egyesület, 2015, December 12) (→ see **Player Affiliation, Landscape Experience, Player Age**).
 - **Adolescents:** Shaped mainly by secondary socialization, they argued enthusiastically but often through frames from school or media. Their reasoning deepened when questions resonated with their lifeworld (T21_20151215; → see **Landscape Experience, Player Age**). As one student put it: “The topics seemed unusual, and by the end we realized that these are everyday problems in our lives”²⁸⁴ (T21_20151215).
 - **General factors:** Group diversity (→ see **Player Diversity**) shaped how far debates unfolded: mixed groups enabled richer exchanges, while homogeneous student groups produced fewer arguments. Residency (→ see **Player Residency**) influenced relevance, as rural participants disengaged from Budapest-centric prompts: “I only

283 „A játékosok ritkán szálltak vitába, vagy azért, mert nem volt elég megosztóak a kérdések, vagy azért, mert túlságosan azonos volt a közeg, hogy másként gondolkodjanak egy-egy kérdésről”

284 „Különleges témáknak tűntek, és a végén rájöttünk, hogy ezek mindennapos problémák életünkben”

[think about these kinds of questions] when I'm in Budapest."²⁸⁵ (T22_20160123). Finally, thematic resonance (→ see **Landscape Pulse**) proved decisive: prompts tied to everyday environments provoked stronger engagement than abstract or distant issues.

- **Step 4: Voting:** Each player individually chose a stance, creating a symbolic snapshot of agreement or disagreement. For adults, this sometimes reflected genuine perspective shifts (partial internalization). For adolescents, voting was often strategic, shaped more by team loyalty than argument evaluation—illustrating how social identity could guide stabilization.
- **Final Step: Constructing with Consensus:** Teams placed earned tokens on the magnetic buildings, embedding negotiated—or strategically imposed—stances into spatial form. This materialized abstract arguments into a visible, collective landscape, reinforcing which knowledge stocks had prevailed.

Tactic Card mediated knowledge stocks through a procedural but flexible structure. Turn-taking rules (→ see **Communication Rules**) prevented domination and opened space for diverse contributions. Yet whether this potential was realized depended on group diversity (→ see **Player Diversity**) and topic resonance (→ see **Player Residency**). Adults drew on layered biographical and professional resources, while adolescents engaged most strongly when questions touched their immediate lifeworld (→ see **Landscape Experience, Player Age**). **Step 3** proved decisive: when debate was well-framed and diverse, multiple socialization phases surfaced and enriched meaning-making. Without this alignment, discussions remained shallow, and later stages reduced knowledge to strategic or symbolic gestures.

9.6 Communicative Action Theory Analysis

This section analyzes the **Tactic Card** prototype through the lens of communicative action theory. Developed as a refinement of earlier prototypes, **Tactic Card** emphasized *structured debate*, symbolic reframing, and adaptive facilitation to foster inclusive and dialogic interaction. The analysis explores how these design strategies shaped the communicative environment of the game—supporting or constraining players' capacity for rational discourse.

Following the analytical framework established in Section 4.4.2.3, the discussion examines three interrelated dimensions: equitable participation (Section 9.6.1), reason-giving procedures (Section 9.6.2), and coherence and depth of agreement (Section 9.6.3). Together, these lenses assess how far **Tactic Card** approximated the normative conditions of communicative action—equality, justification, and reasoned consensus—within gameplay.

285 „Én csak akkor [gondolkodom ilyen kérdéseken], ha Budapesten járok”

9.6.1 Equitable Participation

Habermas's ideal speech situation presupposes that all participants can express, question, and justify views without coercion, and that communicative structures actively mitigate power asymmetries to ensure equal inclusion. **Tactic Card** came closest among the prototypes to approximating these conditions. Its facilitation practices, communicative structure, and symbolic framing were deliberately oriented toward fostering discursive equality.

9.6.1.1 Game Design

The game unfolded through structured steps that shaped access to participation:

- **Step 1: Teaming Up:** Players stood evenly around the circular board and formed teams (→ see **Space Layout, Player Visibility**). Physical symmetry supported equal access but demanded stamina, sometimes leading to fatigue and withdrawal.
- **Step 2: Opinion Duel Between Teams:** Two teams expressed opinions while others observed (→ see **Communication Rules, Communicative Roles**). Alternating active and passive turns created rhythmic inclusion but also intervals of silence.
- **Step 3: Structured Debate:** Triggered by the debate card, this step required at least one speaker from each side. The card's renaming—from *stuka* card (M15_20150905) to debate card—symbolically reframed argumentation from aggression to cooperation (→ see **Symbolism in Gameplay**). Facilitators ensured both positions were voiced, prompting quieter participants, rephrasing questions, and encouraging examples (→ see **Facilitating Discussion and Debate**).
- **Step 4: Voting:** All players voted simultaneously, ensuring that everyone could express a stance (→ see **Symbolism in Gameplay, Player Relationships**).

9.6.1.2 Facilitation

Facilitators actively maintained equality by balancing turns, inviting hesitant speakers, and moderating dominant ones (→ see **Facilitating Discussion and Debate**). They managed transitions between structured and open interaction while adapting to player needs and energy. Long sessions sometimes reduced focus, and physical fatigue occasionally shortened participation. In homogeneous groups of school students, facilitators also worked to balance informal hierarchies (→ see **Player Affiliation**).

Overall, **Tactic Card** advanced procedural and symbolic equality further than earlier prototypes. Through deliberate framing, moderated discussion, and accessible topics, it fostered a broadly inclusive communicative environment. Yet conformity pressures and informal hierarchies occasionally constrained authentic dissent. Equality here was sustained, but not self-maintaining—it required continuous facilitation to remain intact.

9.6.2 Reason-Giving Procedures

According to Habermas, rational communication relies on procedures that allow participants to present, justify, and evaluate validity claims of truth, normative rightness, and sincerity. This section examines how **Tactic Card** scaffolded or constrained these practices, focusing on debate mechanisms, rule interpretation, facilitation, and question design.

9.6.2.1 Procedural Framework and Communication Patterns

Tactic Card reintroduced the familiar *opinion clash* from earlier prototypes but added a new pattern—*structured debate*—that made reason-giving a formal rule rather than an improvisation. This shift institutionalized argumentation within gameplay.

Gameplay progressed through defined communicative stages:

- **Step 2: Opinion Duel Between Teams:** The questioning team posed a yes-or-no landscape pulse. Both teams signaled their stance—raising a hand for “yes,” squatting for “no.” The questioning team could accept the score or trigger a debate for deeper discussion.
- **Step 3: Structured Debate:** At least one representative per side had to speak; facilitators encouraged wider participation. Discussion continued until **Step 4** was called.
- **Step 4: Voting:** All players voted again, finalizing the round’s result.

The *opinion clash* remained the communicative backbone, while the added debate step offered structured reasoning. Because this step was optional, players balanced between deliberation and strategy—bypassing debate could yield faster points (→ see **Tactical Dynamics, Scoring System**). Thus, **Tactic Card** provided a framework for rational discourse but left its activation to player choice.

9.6.2.2 Rational Argumentation and Engagement with Validity Claims

Opportunities for rational argumentation concentrated in **Step 3: Structured Debate**. Among adolescents, two tendencies emerged: avoidance of disagreement for the sake of points and a counter-movement that debated for its own sake. Adults engaged more selectively, debating when topics matched their interests (→ see **Player Age**).

The communicative design of landscape pulses determined which validity claims could be raised:

- **Timeliness:** For adults, questions linked to current social contexts—such as park fencing or urban policing—elicited reasoning combining factual, moral, and personal dimensions.
- **Relevance:** For adolescents, relatable issues supported sincerity and moral reflection; abstract questions prompted quick affirmations instead.
- **Presentation:** Clear, concrete phrasing allowed equal comprehension and fair contestation.

When these three factors aligned, debates activated all validity dimensions. **Tactic Card** thus achieved moments of deliberation when topical relevance and linguistic clarity met facilitation that sustained balance. Everyday themes—leisure, pets, or school life—linked reasoning to players' lifeworlds, enabling those with less debate experience to contribute meaningfully.

9.6.2.3 Facilitation and Support for Rational Argumentation

Facilitation transformed **Tactic Card** from competitive play into a deliberative exercise. Facilitators enforced procedural symmetry—ensuring both sides spoke—and adapted questions to participants' capacities (→ see **Facilitating Discussion and Debate, Encouraging Diverse Perspectives**). With adolescents, they simplified wording, extended time, and encouraged quieter players (→ see **Adapting to Players Need**). These acts mirrored Habermas's procedural ideals by sustaining equal opportunity for justification. Participants themselves began recognizing that fairness depended on how rules were applied. Facilitation thus operated as both procedural and pedagogical mechanism, showing how communicative rationality can be learned through structured play.

9.6.3 Coherence and Depth of Agreement

Agreement in **Tactic Card** unfolded through two decision points—**Step 2** and **Step 4**—each revealing different relations between reasoning, consensus, and symbolic construction.

9.6.3.1 Depth of Agreement

In **Step 2**, the questioning team posed a yes-or-no landscape pulse, and both teams signaled simultaneously. When gestures matched, construction followed immediately in **Final Step A: Construction with Consensus**. These moments often produced only apparent agreement. In several sessions, teams rejected scores and entered debate instead, revealing internal divisions (T18_20151128; E_20151201). Adolescents frequently adjusted gestures strategically to win points or avoid conflict (T21_20151215). Consensus thus appeared as *Übereinstimmung* or *Gleichgestimmtheit*—agreement without reasoning—reinforced by a rule system equating harmony with progress (→ see **Player Authenticity, Tactical Dynamics, Scoring System, Symbolism in Gameplay**).

When disagreement surfaced, **Step 3: Structured Debate** and **Step 4: Voting** were activated via the debate card. At least one representative from each stance argued before a collective vote concluded the round in **Final Step B: Construction with Debate**. Most sessions achieved *Einigung*—procedural agreement through majority voting—though some, through facilitation, approached *Verständigung* (mutual understanding) as players clarified values or restated others' arguments (→ see **Game Duration, Facilitating Discussion and Debate**).

Under ideal conditions—ample time, comfortable setting, and active moderation (→ see **Ideal Conditions**)—players occasionally reached *Einverständnis*, reframing questions until all could agree. In Pécs (T19_20151203; E_20151212), debate on a car-free day ended in consensus after adding exceptions for

emergency and postal services. At the *Design Meetup* (T20_20151210), disagreement over sharing valuables became consensus when each participant proposed lending one personal object. These cases exemplified co-constructive reasoning beyond the game's scoring logic.

Across these pathways, the distribution of agreement mapped onto Habermas's spectrum:

- *Übereinstimmung* / *Gleichgestimmtheit* dominated in **Step 2**'s rapid, tactical alignments;
- *Einigung* through **Step 4**'s formal voting;
- *Verständigung* during facilitated debates;
- and rare *Einverständnis* in reframed, value-based consensus.

9.6.3.2 Game Design and Facilitation for Agreement

Game design and facilitation jointly defined how consensus emerged and what depth it reached.

The scoring system rewarded alignment and penalized dissent (→ see **Scoring System, Symbolism in Gameplay**). Team formation encouraged conformity, while the debate card—though intended to promote reasoning—allowed questioning teams to control when dialogue occurred, producing selective deliberation (→ see **Tactical Dynamics, Interaction Choice, Player Engagement**). The rule that construction followed only from agreement framed unity as civic virtue and disagreement as failure.

Facilitators worked to counter this bias by prompting justification, reformulating questions, and balancing talk between participants (→ see **Facilitating Discussion and Debate, Player Age**). Where they had time to moderate fully, discussions deepened; under time pressure, closure reverted to procedural voting.

Across playtests, **Tactic Card** converted dialogue into civic construction yet still equated consensus with success. It achieved *Verständigung* intermittently and *Einverständnis* only under ideal conditions. The prototype marked a transitional stage—reasoning returned to the center of play, but dissent remained domesticated: transformed from open difference into structured harmony, and from dialogue into score.



Part V. Findings

10

Game Design Catalogue and Facilitation Guide for Enhancing Small-Group Communication in Serious Participatory Landscape Games

This chapter presents the first of three cross-case synthesis chapters that consolidate the findings of the research. Addressing Aim 1, it builds on the detailed analyses of the four *Urbanity* prototypes (Chapters 6–9) to examine how game design and facilitation shape small-group communication about landscape issues in participatory landscape games. The discussion moves from individual prototypes toward a comparative perspective, tracing how design and facilitation decisions collectively influenced the quality, inclusivity, and depth of interaction.

Section 10.1 introduces the *Game Design Catalogue*, which distills the design factors that most strongly affected communication in *Urbanity* and translates them into transferable principles for future development. Section 10.2 presents the *Facilitation Guide*, which identifies facilitation tasks that complement design principles in supporting group dialogue, problem-solving, and decision-making.

Together, these two sections translate the empirical findings of *Urbanity* into a practical framework for designers and facilitators who aim to create communication-centered serious participatory landscape games that consciously structure and sustain meaningful interaction.

10.1 Game Design Catalogue: Supporting Small-Group Communication in Serious Participatory Landscape Games

The *Game Design Catalogue* identifies thirty-two design factors that influence how small groups of players communicate about landscape issues in serious participatory landscape games. Considering these factors consciously during the design process helps ensure that games are developed with small-group communication in mind—structuring interaction to support collective reasoning, dialogue, and decision-making aligned with the communicative intentions of the game.

The factors are organized into three categories communicative design strategies (Section 10.1.1), which encompass core mechanics and structures that frame interaction, including objectives, rules, group formats, prompts, and symbolic systems; socio-spatial conditions (Section 10.1.2), which refer to environmental and situational aspects such as layout, time, and setting that influence when and how dialogue unfolds; player attributes (Section 10.1.3), which include traits, backgrounds, and dynamics that affect how players interpret, express, and engage.

Each factor is presented through a consistent three-part structure: definition (what the design aspect means), design advice (how to apply it), and empirical insight (how it played out in the *Urbanity* prototypes). Together, these entries form a reference for designing games as communication environments that structure and generate small-group interaction.

10.1.1 Communicative Design Strategies

10.1.1.1 Communication Objective

Definition: Communication objectives define the kind of interaction a game aims to foster—such as debate, persuasion, negotiation, or shared understanding. These goals shape how players engage, what counts as success, and how communication unfolds. ↔ See Sections 9.4.3.1.3 and 10.1.1.1.

Design advice: Define communication objectives clearly and align them with game structures. Whether the goal is expression, persuasion, or consensus-building, ensure that mechanics, symbols, scoring, and facilitation practices support that form of interaction. Objectives should not be assumed to emerge naturally—they must be designed into gameplay to guide how players engage, disagree, or align.

Empirical insight: The *Urbanity* prototypes showed how mechanics shaped implicit communication goals. *Clash* encouraged expression but rewarded alignment. *Rulebook Parliament* supported persuasion through speeches and voting. *Street Parliament* emphasized deliberation and shared understanding. *Tactic Dice* enabled flexible stance-taking but still pushed toward consensus. In *Tactic Card*, despite its framing around dialogue and inclusion, mechanics often favored agreement over depth—until debate cards surfaced deeper disagreement. This turning point revealed that communication goals must be explicitly defined and structurally supported to foster meaningful, reflective engagement.

10.1.1.2 Landscape Pulse (Communication Topic)

Definition: Landscape pulses—also referred to as communication topics—are short prompts (e.g., questions, statements, or scenarios) that introduce a theme for discussion and shape small-group interaction toward dialogue, problem-solving, or decision-making. ↔ See Sections 6.4.3.1, 7.4.4.3, 8.4.4.1, 9.4.3.1.1, 9.4.3.2.4, and 10.1.1.2.

Design advice: Well-crafted pulses activate players' lived experience, shaping both inclusivity and depth of discussion. Use timely, familiar, and clearly phrased prompts to lower barriers, while complexity or controversy sustains engagement. Allow players to choose among relevant topics to enhance autonomy and investment. For diverse groups, combine everyday concerns with abstract or contested issues.

Empirical insight: Across *Urbanity*, pulse design strongly influenced engagement. Simple yes-or-no questions in *Clash* triggered *opinion clashes*.

Relatable questions in **Parliament** deepened dialogue. Divisive topics in **Tactic Dice** fueled debate but required structure. Player choice improved connection in **Tactic Card**, while distant or abstract wording reduced clarity and participation.

10.1.1.3 Communication Rules

Definition: Communication rules shape how, when, and by whom interaction happens during gameplay. These rules vary in strictness—from tightly regulated turns and formats to open, spontaneous exchanges—and influence who speaks, how long, in what order, and through which modes (verbal, non-verbal, or symbolic). ↔ See Sections 7.4.4.1, 8.4.4.2, and 10.1.1.3.

Design advice: Think of communication rules as a dial between order and spontaneity. When clarity and equitable contribution are priorities, lean toward structured setups—such as defined turns or time limits. If creative dialogue or responsiveness is the goal, allow more flexible or emergent interaction—but include facilitation or pacing tools to prevent confusion or dominance. Align rule strictness with communication intentions and context.

Empirical insight: The **Urbanity** prototypes illustrate how different levels of rule strictness shaped discourse. **Clash** enforced binary gestures and synchronized responses—clear and equitable but limited in depth. **Rulebook Parliament** imposed one-minute *defense speeches*, tightly regulating contributions. **Indoor Parliament** allowed reactive speech to develop organically, enriching dialogue. **Street Parliament** removed rules entirely, sparking lively exchange but requiring strong facilitation. In **Tactic Dice**, unmoderated debates quickly lost focus, while **Tactic Card** introduced an overly fixed yes-then-no argumentation sequence led by the facilitator. Both excessive structure and total freedom hindered meaningful interaction—rule strictness had to match communicative goals and group dynamics.

10.1.1.4 Ritualized Expression

Definition: Ritualized expressions are game-specific, repeated gestures or cues—such as simultaneous hand raises or movements—that carry shared meaning. These actions form a symbolic language that streamlines communication and reinforces group cohesion. ↔ See Sections 6.4.3.3, 8.4.2.1, and 10.1.1.4.

Design advice: Use ritualized actions to support clarity, rhythm, and engagement. Simple cues—like synchronized hand signals for yes/no—help players act in sync and interpret others. They structure interaction, reduce uncertainty, and anchor participation through memorable repetition.

Empirical insight: The *opinion clash* ritual in **Clash** introduced a ritual where players counted to three and answered simultaneously with “yes” or “no” gestures. This synchronized act established a shared rhythm. In **Parliament**, it evolved into hand signals—raising a hand for “yes,” squatting for “no.” In **Tactic Card**, the simplified version (hands up or down) maintained rhythm. In **Tactic Dice**, the absence of this ritual caused hesitation; players were unsure how

to respond, disrupting flow. Once established, such rituals became second nature—smoothing transitions and boosting confidence.

10.1.1.5 Communicative Roles

Definition: Communicative roles are the functional positions players assume during interaction—such as speaker, addressee, or observer—that guide how dialogue flows within small groups. These roles influence who contributes, who listens, and who reflects, shaping participation dynamics. ↔ See Sections 6.4.3.5, 7.4.1.2, 8.4.4.3 and 10.1.1.5.

Design advice: Map communicative roles alongside the game's functional or fictive roles. A presenter might act as speaker, a responder as addressee, and an observer as silent reflector or scorer. Consider when and how roles are assigned—fixed or rotating—and how they evolve across phases to balance participation.

Empirical insight: In *Clash*, pairs alternated between speaking and listening while others observed—creating clear role distinctions. In *Parliament*, delegates spoke during structured rounds while others joined later or listened until full-group dialogue began. In *Tactic Dice*, everyone could speak or respond, removing the observer role. This increased engagement but required facilitation to maintain balance. Shifts in communicative roles influenced rhythm, fairness, and overall interaction quality.

10.1.1.6 Communication Modes

Definition: Communication modes are the forms through which players convey meaning in gameplay—verbal (spoken or written), non-verbal (gestures, eye contact), or physical (movement, props). These modes—and how they interweave—shape how information is shared, interpreted, and enacted. ↔ See Sections 6.4.2.4, 6.4.3.2 and 10.1.1.6.

Design advice: Design communication as a multimodal system combining verbal, non-verbal, and physical expression. Match these modes to your game's goals, pace, and setting. Non-verbal cues like gestures can lower barriers; physical movement builds rhythm and engagement; structured dialogue deepens reflection. Adjust mode balance to your intended interaction style—expressive, strategic, cooperative, or confrontational.

Empirical insight: In *Clash*, interaction began as a non-verbal rhythm-based exchange—synchronized movement and eye contact, triggered by sound cues. Written pulses then introduced verbal yes/no responses performed in unison. Later designs (*Parliament*, *Tactic Dice*, *Tactic Card*) layered non-verbal voting with *structured debates*—progressing from physical symbolism to verbal reasoning. This evolution demonstrated how shifting communication modes scaffolded engagement, pacing, and depth.

10.1.1.7 Group Size

Definition: Group size refers to the total number of players participating in a session, shaping how easily participants can engage, contribute, and sustain

small-group communication. It affects interaction flow, participation equity, and pacing. ↔ See Sections 7.4.1.5, 9.4.1.1, and 10.1.1.7.

Design advice: Focus here on the scale of communication. Consider how the number of participants will influence the intensity, rhythm, and balance of conversation. Size is not merely logistical—it defines the communicative setting. Small groups may need facilitation or prompts to stay active, while large ones require clear turns, timing, or visual tools to prevent passivity. Match the scale of play to the desired level of energy and intimacy.

Empirical insight: The various *Urbanity* prototypes demonstrated how numbers alone shaped interaction dynamics. In *Indoor Parliament*, 7–15 participants needed to be divided into smaller subgroups to maintain balanced speaking and listening. *Street Parliament* fluctuated widely: when school classes of over thirty joined, only half could play at once while the others engaged in side activities before swapping roles; when only one to three players appeared, facilitators stepped in to sustain flow. These contrasts showed that group size can easily tip a session toward either silence or energy—each configuration requiring its own communicative scaffolding.

10.1.1.8 Group Division

Definition: Group division is the structural arrangement of participants into one or more interaction units—fixed, random, or player-chosen—that shapes who interacts with whom, how often, and in what capacity. This design element guides the intensity, sequence, and equity of small-group communication. ↔ See Sections 6.4.1.1, 7.4.1.1, 8.4.3.4, 9.4.1.2, and 10.1.1.8.

Design advice: This factor concerns the structure of interaction and can help address challenges related to group size. Reflect on how participants will be distributed across the game flow—in sub-units or full-group moments—and how often these constellations change. When do smaller units serve better focus, and when is it useful to bring everyone together? Fixed or assigned groups provide order but may reduce agency and connection, while player-chosen or rotating formations sustain energy yet risk imbalance. Treat division as a design lever that shapes rhythm and inclusivity across the session.

Empirical insight: The *Urbanity* cases illustrate diverse approaches to structuring interaction. In *Clash*, players formed pairs that were randomly shuffled through rhythmic movement, while the *earthquake* mechanism granted freedom to select new partners or cluster in small groups. In *Parliament* divided players into teams of two to four for intimate discussion, then into delegates' forums that restructured participation; final voting reunited everyone in a full-group moment. *Tactic Dice* defined initial teams and later split them into duellists and observers, while allowing players to decide how many participants would take part in each duel. These shifting divisions determined whether dialogue remained bounded or continuously renewed, linking structural design directly to the vitality of communication.

10.1.1.9 Interaction Choice

Definition: Interaction choice refers to whether players have autonomy to engage in interactions. Games may offer moments of player choice or enforce participation through turn-taking or chance-based triggers. This design decision shapes agency, pacing, and the quality of small-group communication. ↔ See Sections 6.4.2.3, 8.4.5.1, 9.4.2.3, and 10.1.1.9.

Design advice: Here the concern is autonomy. Consider who decides when and how players engage—the game system, the facilitator, random events, or the players themselves. Autonomy nurtures authenticity and ownership, while structured turns secure fairness and pacing. Combining both—moments of freedom and moments of control—helps maintain inclusion without suppressing spontaneity.

Empirical insight: The *Urbanity* prototypes revealed how the location of choice shaped communication. In *Clash*, the earthquake mechanism offered genuine agency: players could opt in or out of the exchange. *Parliament* explored varying freedoms—*Rulebook Parliament* restricted dialogue to a single delegate's defense speech; *Indoor Parliament* allowed any participant to initiate a defense and follow it with an argument; *Street Parliament* opened debate to all. *Tactic Dice* replaced choice with dice rolls, forcing or skipping *opinion duels* at random, which unsettled pacing and reduced investment. *Tactic Card* offered full freedom to contribute, yet each turn was conditional—players could speak only if they held an argument for or against. Across formats, genuine choice fostered ownership, while its absence produced compliance rather than dialogue.

10.1.1.10 Partner Selection

Definition: Partner selection is the method by which players are grouped for interaction—whether chosen by participants, assigned by rules, or randomized. This mechanism determines whose perspectives are exchanged and how interaction patterns emerge. ↔ See Sections 6.4.2.2, 7.4.2.1, 8.4.3.3, and 10.1.1.10.

Design advice: This dimension deals with relational variety. Since players are required to interact, consider how much freedom they have in choosing partners and how this shapes whose perspectives meet. Allowing choice can build comfort or enable tactical alignment, while assigned or random pairing broadens perspectives and introduces surprise. Balancing familiarity with diversity helps align partner selection with the game's communicative intentions.

Empirical insight: The *Urbanity* prototypes reveal how different pairing methods shaped exposure to difference. In *Clash* players were initially paired and reshuffled nonverbally through rhythmic movement—entirely guided by game design. Only during the earthquake mechanism could they choose whether and with whom to interact. *Parliament* combined facilitator-formed, randomly drawn, and self-organized teaming moments, but later communication steps

fixed partner combinations. **Tactic Dice** offered freedom in forming teams and selecting duelist partners, yet dice rolls later determined which teams entered an *opinion clash*. **Tactic Card** predefined partners within group duels. Across these formats, partner selection determined whether interaction reinforced comfort zones or provoked encounters across perspectives.

10.1.1.11 Scoring System

Definition: Scoring systems are the mechanics that reward player actions and track progress. They shape how participants perceive success and steer communication toward specific dynamics—such as competition, cooperation, or consensus—depending on how outcomes are incentivized. ↔ See Sections 6.4.4.1, 7.4.6.1, 8.4.7.1, 9.4.5.1, and 10.1.1.11.

Design advice: Treat scoring as a communication signal rather than a technical add-on. The way points are earned tells players what matters—consensus, persuasion, or deliberation. If rewards overemphasize agreement or efficiency, players may avoid genuine debate. Link scoring clearly to your communicative goal, ensuring that success depends on the quality of exchange, not only its outcome.

Empirical insight: In **Urbanity**, scoring consistently favored consensus, though its influence varied across prototypes. In **Clash** points were explicitly awarded for agreement, making consensus the unquestioned goal. In **Parliament**, unclear criteria shifted players' attention toward the pleasure of debate, yet the tiered system still attempted to reward alignment rather than deliberation. **Tactic Dice** combined wager-based scoring with tactical play, clearly signaling that instant agreement yielded the highest return—even if authenticity was sacrificed. This effect was reinforced when unresolved rounds were decided by chance rather than by further discussion. **Tactic Card** similarly privileged quick consensus, though it introduced minor rewards for post-debate reflection. Across all formats, scoring systems directed communication toward resolution over exploration—revealing how reward structures quietly determine the depth and purpose of dialogue.

10.1.1.12 Feedback Mechanisms

Definition: Feedback mechanisms are visual or procedural signals that reflect player decisions and outcomes. They guide behavior toward the game's goals and communication objectives by providing cues about progress and performance. ↔ See Sections 8.4.7.3 and 10.1.1.12.

Design advice: Feedback tells players what counts as success—so design it deliberately. Decide what you want them to value: consensus, debate, persuasion, or collective creation. Make results visible and shared through color, form, sound, or gesture. Use quick signals for immediate reactions and cumulative ones for longer awareness (e.g., how the city grows). Ensure everyone can see and interpret cues equally, so feedback strengthens, rather than distorts, the intended communication goals.

Empirical insight: In *Tactic Dice*, magnetic points visualized team decisions and turned collaboration into visible construction. Color-coded magnets clarified achievements but also fueled competition, as players focused on their own buildings instead of the collective city. The circular layout further fragmented visibility, limiting shared awareness. Across cases, feedback systems shaped how players interpreted success—whether as joint creation, personal progress, or strategic victory—showing that even simple cues can redefine the tone and focus of communication.

10.1.1.13 Tactical Dynamics

Definition: Tactical dynamics refer to strategic behaviors shaped by game mechanics that influence how players interact and communicate. When players aim to optimize outcomes—by scoring, avoiding conflict, or accelerating play—these decisions affect group dialogue and the depth of engagement. ↔ See Sections 8.4.3.1, 9.4.2.1, and 10.1.1.13.

Design advice: Tactical play is inevitable once players grasp how the system works. The task is not to eliminate it but to steer it toward your communicative goal. For deliberation, reward argumentation and reflection; for consensus, emphasize coordination. Because tactics arise from several elements—rules, scoring, roles, feedback—no single change controls them. Use playtesting to observe emergent strategies and tune incentives or visibility so that tactical play reinforces, rather than distorts, the intended interaction.

Empirical insight: In *Urbanity*, tactical play surfaced most clearly in *Tactic Dice* and *Tactic Card*. In *Tactic Dice*, the mix of partner selection, duelist roles, and wager-based scoring encouraged quick consensus with like-minded teams, minimizing debate. Learning from this, *Tactic Card* reintroduced dialogic tension through debate cards and visible gestures. Yet these same cues triggered new tactics—students mirrored peers to stay aligned and avoid disagreement. Tactical play thus exposed how systems reward efficiency over depth and why iterative testing is crucial to realign structure with communicative intention.

10.1.2 Socio-Spatial Conditions

10.1.2.1 Game Context

Definition: Game context refers to the broader spatial, temporal, and social conditions in which gameplay occurs. It includes location (e.g., indoor/outdoor, public/private), timing (e.g., time of day, duration), and situational factors (e.g., background noise, social energy)—all of which influence communication dynamics. ↔ See Sections 7.4.1.6 and 10.1.2.1.

Design advice: Ask where, when, and with whom your game unfolds. Context defines attention, comfort, and energy as much as mechanics do. Select spaces that match the intended interaction—public for spontaneity, enclosed for focus—and adapt the design to local rhythms, not the other way around.

Empirical insight: Across *Urbanity*, context proved as decisive as structure. Public squares, classrooms, and festivals each produced distinct communication patterns. Outdoor games drew attention but faced interruptions from noise and movement. Indoors, players focused better but visibility and accessibility dropped. Mismatched timing—too early, too brief, or during social highs—sometimes undercut reflection. Designers must therefore consider not just what the game is about, but when, where, and with what social pulse it will be played.

10.1.2.2 Ambient Conditions

Definition: Ambient conditions refer to the physical characteristics of the environment—such as noise, weather, seating, and spatial arrangement—that influence how players focus, interact, and sustain small-group communication. ↔ See Sections 7.4.1.7, 9.4.1.3, and 10.1.2.2.

Design advice: Treat ambience as an active part of design. Consider how temperature, sound, light, and seating affect concentration and tone. Decide whether you want an enclosed, reflective atmosphere or a lively, adaptive one—and adjust layout, materials, and facilitation accordingly.

Empirical insight: Ambient factors acted as invisible moderators of dialogue. *Clash*, *Tactic Card*, and *Indoor* thrived in quiet, seated setups where low distraction supported deliberation. *Street Parliament*, exposed to weather and urban noise, produced more spontaneous, grounded talk but often fragmented focus. Facilitators adapted constantly—moving props, repositioning groups, or shortening turns. These contrasts show that physical ambience is never neutral: it can open or close the space for reflection.

10.1.2.3 Space Layout

Definition: Space layout refers to the spatial organization of the play area, including the arrangement of players and game elements. The configuration of space shapes how participants move, who they can see and hear, and what forms of interaction are made possible—or restricted. ↔ See Sections 6.4.1.2, 7.4.3.1, 8.4.1.2, and 10.1.2.3.

Design advice: Design layout as communication structure. Circular or semi-open forms foster visibility and equality; frontal or tiered setups focus attention but risk passivity. Use distance, height, and orientation deliberately to signal roles and rhythm.

Empirical insight: In *Urbanity*, layout proved decisive for participation. Circular setups around bowls (*Clash*) and board corners (*Tactic Dice*) structured rhythm and turn-taking. *Street Parliament*'s open circle balanced accessibility and audibility, while fishbowl formats (*Rulebook*, *Indoor Parliament*) made speakers visible but sidelined others. In *Tactic Dice*, players intuitively treated the board's "city" as a bounded zone—throwing dice between buildings. This showed that space not only organizes play but conveys meaning: a few meters or an imagined border can decide who feels central and whose voice carries.

10.1.2.4 Player Proximity

Definition: Player proximity refers to the physical distance between players, shaping the immediacy, intimacy, and mode of their interactions. Proximity influences the use of verbal, non-verbal, and embodied cues, thereby affecting focus, connection, and overall group cohesion. ↔ See Sections 6.4.1.3, 7.4.1.3, and 10.1.2.4.

Design advice: Adjust distance to fit the tone of dialogue. Tight clusters amplify focus and trust; wider spacing encourages performative or cross-group exchange. Calibrate proximity to environmental noise and the scale of conversation you want to support.

Empirical insight: Proximity defined whether communication felt shared or siloed. In *Clash*, paired closeness generated focus but isolated talk. *Indoor Parliament*'s spacing worked indoors yet failed outdoors—noise overwhelmed speech until teams moved closer to one side. In *Tactic Dice*, compact formations supported collaboration and steady pacing. Closeness fosters engagement, but too much proximity can reduce diversity. Design distance as social breathing room.

10.1.2.5 Player Visibility

Definition: Player visibility refers to the extent to which players maintain a clear line of sight to one another. Visibility influences attention, awareness, and group-wide engagement by determining who is seen, who is watching, and who feels addressed or involved. ↔ See Sections 6.4.1.5 and 10.1.2.5.

Design advice: Plan sightlines as social cues. Who can see whom determines who feels addressed. Use openness for group awareness; use partial views to concentrate attention or frame roles.

Empirical insight: Visibility steered engagement across *Urbanity*. In *Clash*, players' view of the central bowl was blocked, reinforcing one-to-one focus. In *Parliament*, delegates faced each other, turning backs to teammates—highlighting hierarchy between active and passive roles. In *Tactic Dice*, eye contact between duelists created tension and intensity. Visibility can equalize or divide; designing sightlines means designing power.

10.1.2.6 Player Audibility

Definition: Player audibility refers to the clarity with which players can hear and understand one another. Audibility influences attention, participation, emotional tone, and the potential for shared understanding. ↔ See Sections 6.4.1.4, 7.4.4.2, and 10.1.2.6.

Design advice: Design for listening as much as speaking. Quiet spaces foster reflection; noisy ones amplify performance. Anticipate how sound interacts with layout and proximity, and test whether players can sustain attention without strain.

Empirical insight: Audibility consistently shaped inclusion. In *Clash*, distant players lost the thread of play. In *Indoor Parliament*, back-row seats muted participants' voices and presence. *Street Parliament* faced the toughest conditions—traffic, echoes, shifting attention—prompting facilitators to cluster groups tightly. Clear hearing proved central to mutual understanding; when voices fade, so does participation.

10.1.2.7 Game Duration

Definition: Game duration refers to the overall length of play. It shapes the rhythm, depth, and inclusivity of small-group communication, affecting players' ability to engage meaningfully without losing energy or focus. ↔ See Sections 8.4.7.4 and 10.1.2.7.

Design advice: Match duration to communicative intent and context. Ask: How much time do players need to think, speak, and listen meaningfully—without fatigue? Short formats energize; longer ones deepen.

Empirical insight: Timing directly affected engagement. *Tactic Dice*, 45-minute sessions balanced focus and depth for small teams. *Street Parliament* thrived in quick bursts suited to public flow. In classrooms (*Tactic Card*), fixed 45-minute periods required parallel play for large groups. Duration sets not only pace but cognitive space; too short stifles thought, too long drains attention.

10.1.2.8 Ideal Conditions

Definition: Ideal conditions refer to the communicative circumstances under which participants can reach mutual understanding and, when appropriate, consensus. Following the Habermasian notion of ideal speech, such conditions emerge when players feel psychologically safe, have sufficient time, and can exchange views free from pressure or hierarchy. Under these circumstances, they listen attentively, reconsider positions, and co-create shared or creative outcomes. ↔ See Sections 9.4.3.1.4 and 10.1.2.8.

Design advice: Design not only the rules of debate but the atmosphere that sustains it. Encourage environments where all voices can speak without penalty and where disagreement remains legitimate. Allow flexibility—time to pause, rephrase, or adapt prompts—so reflection can deepen instead of being rushed toward closure. Facilitation and game design should maintain equality of voice and protect the tempo required for genuine deliberation.

Empirical insight: In *Tactic Card*, such conditions occasionally took shape: participants rephrased questions, introduced exceptions (e.g., a car-free day with allowances for emergencies), and collectively built consensus. These moments of mutual understanding felt authentic yet fragile—when the structure pushed players back to binary choices, agreement dissolved. The findings show that consensus arises less from mechanics than from a communicative climate of safety, patience, and openness.

10.1.2.9 Symbolism in Gameplay

Definition: Symbolism in gameplay refers to the implicit messages embedded in a game's terminology, mechanics, and visual cues. These symbolic elements shape how players interpret rules, roles, and outcomes—guiding communication toward competition, cooperation, or deliberation. ↔ See Sections 7.4.4.4, 7.4.5.1, 8.4.7.2, 9.4.2.4, 9.4.5.2, and 10.1.2.9.

Design advice: Every term and gesture signals a worldview. Ask: What behaviors do these symbols invite? Align names, metaphors, and imagery with the intended tone—avoid reinforcing hierarchy or conformity if your goal is open dialogue.

Empirical insight: Symbols quietly shaped player behavior. In *Parliament*, phrases like *defense speech* and the scoring system framed discussion as confrontational and persuasive. In *Tactic Dice* let dice override dialogue, suggesting that chance could replace deliberation; removing construction elements after failed consensus visually implied destruction. In *Tactic Card*, designers replaced the forceful *knobstick* concept with a debate card to encourage respectful disagreement. Still, consensus-seeking scoring and the game's stated objective—to build the city in the highest possible agreement—raised concerns about suppressing pluralism.

10.1.2.10 Cultural Representations

Definition: Cultural representation in games refers to how mechanics, roles, and interactions reflect or challenge societal values, norms, and power structures. Design choices—such as who speaks, how decisions are made, or what is rewarded—implicitly convey messages about authority, inclusion, and cooperation. ↔ See Sections 7.4.7, 8.4.8, 9.4.6, and 10.1.2.10.

Design advice: Treat games as cultural expressions. Ask what worldview your design performs—hierarchy, equality, cooperation, or pluralism. Examine how roles, rules, and rewards encode these values and whether they support the intended communication ethos. Align gameplay structures with the kind of public culture you wish to reinforce or critique.

Empirical insight: Across *Urbanity*, several prototypes performed different models of democracy. *Rulebook* and *Indoor Parliament* mirrored representative systems but reinforced hierarchy through fixed speaking roles. *Street Parliament* removed formal boundaries, leaning toward deliberative democracy. *Tactic Dice*'s competitive *opinion duels* and chance-based decision-making conflicted with its deliberative aims, prompting reflection on how participation and urban planning intertwine. *Tactic Card* encouraged inclusion yet still rewarded consensus, softening dissent. In each case, gameplay acted as a cultural narrative—revealing, rehearsing, or challenging how people experience participation, equality, and power.

10.1.3 Player Attributes

10.1.3.1 Landscape Experience

Definition: Players' landscape experience refers to how their socially and culturally shaped understandings of landscape—what they know, value, and have learned to notice about places—inform how they interpret and communicate about landscape issues during gameplay. The concept draws on social constructivist landscape theory, which views landscapes not merely as physical settings but as shared cultural constructions shaped by use, memory, and meaning. ↔ See Sections 9.4.3.1.2 and 10.1.3.1.

Design advice: Design games that resonate with players' lived and learned understandings of landscape. When topics or sites feel too distant from what participants know—through experience, education, or collective memory—communication weakens. Choose issues linked to recognizable places or landscape values so players can build on what they already understand. This grounding enables more reflective and situated dialogue.

Empirical insight: In *Urbanity*, engagement depended on how well topics matched players' landscape knowledge. In *Tactic Card*, debates about fences and surveillance reflected lived familiarity, while rural participants found urban prompts less relatable. Conversely, in *Tactic Dice*, expert players found questions too simple, limiting discussion depth. When design aligns with players' experiential and conceptual knowledge, dialogue becomes substantive and meaningful.

10.1.3.2 Player Age

Definition: Player age shapes how individuals perceive, interpret, and communicate about landscapes. It reflects stages of landscape socialization—the process through which people learn cultural meanings, values, and norms associated with places. Age thus influences reasoning pace, vocabulary, and how players position themselves toward landscape issues during gameplay. ↔ See Sections 7.4.4.7 and 10.1.3.2.

Design advice: Design with stages of landscape socialization in mind. Younger players benefit from tangible, story-based formats that link abstract issues to lived experience. Adolescents engage through *structured debate* and visible outcomes that help negotiate shared values. Mixed-age groups enrich dialogue but need facilitation to balance pace and reasoning styles.

Empirical insight: Across *Urbanity*, age shaped both what players noticed and how they discussed it. In *Street Parliament*, intergenerational exchanges contrasted moral and practical reasoning—children emphasized fairness and empathy, adults feasibility and design logic. *Tactic Card* showed adolescents needed relatable framing; *Tactic Dice* players, at a tertiary socialization stage, sought more complex challenges. Designing for age means offering multiple entry points into landscape dialogue—each tuned to how players have learned to see and articulate place.

10.1.3.3 Player Residency

Definition: Player residency describes how people's living environments shape their understanding and communication about landscapes. Where players live—urban, suburban, or rural—influences what they notice, value, and consider relevant in landscape discussions. This reflects their interpretive social landscape: the socially and culturally learned meanings, emotions, and norms that guide how they read and talk about space. Residency therefore conditions which landscape issues feel pressing and how players position themselves within dialogue. ↔ See Sections 9.4.3.2.3 and 10.1.3.3.

Design advice: Design for multiple lived landscapes. Urban players often relate to themes of mobility, density, and shared infrastructure, while suburban and rural players emphasize access, openness, or continuity with nature. Avoid city-centric prompts—use adaptable, locally grounded questions that let participants connect issues to their own environments and experiences.

Empirical insight: Across **Urbanity**, residency shaped engagement and tone. In **Parliament**, city dwellers focused on infrastructure and coordination, while suburban participants stressed planning and everyday usability. In **Tactic Card**, rural students disengaged when examples referenced Budapest, but localized versions revived participation. These cases show that players' lived landscapes are not just settings but interpretive worlds shaping how communication unfolds.

10.1.3.4 Player Affiliation

Definition: Player affiliation refers to the social and professional identities through which people interpret landscapes and assign meaning to them. From a social constructivist perspective, these affiliations—such as being a cyclist, parent, or architect—shape how players read spatial situations and express values in small-group communication. Affiliations act as cultural filters, reinforcing particular interpretations of what matters in a landscape and how it should function. ↔ See Sections 7.4.4.8 and 10.1.3.4.

Design advice: Affiliations bring expertise and lived insight but can easily narrow the communicative field. Design for both depth and diversity: create opportunities where specific perspectives can surface, yet ensure moments of exchange across groups. Use role rotation or mixed-group discussion to prevent echo chambers and help players question their standpoint.

Empirical insight: In **Street Parliament**, cyclists framed issues through mobility and infrastructure, while mobility-impaired participants emphasized accessibility and hygiene. Parents focused on safety, and architects discussed aesthetics and usability. These affiliations enriched debate but sometimes dominated it. Sessions worked best when contrasting affiliations met—broadening understanding and revealing how collective landscapes are negotiated through different social lenses.

10.1.3.5 Player Relationships

Definition: Player relationships describe how degrees of familiarity—ranging from strangers to close peers—shape comfort, confidence, and communication in gameplay. Pre-existing ties influence not only who speaks and how openly, but also how group norms and hierarchies form during discussion. ↔ See also Sections 7.4.4.5, 8.4.1.1, and 10.1.3.5.

Design advice: Acknowledge that relationships carry social structure. Familiar players tend to speak more freely and collaborate intuitively but may reproduce dominance patterns. Unfamiliar groups often need icebreakers or structured turns to build trust and ensure equal participation. Use rotating roles, mixed teams, or guided prompts to rebalance confidence levels and maintain inclusion across differing familiarity.

Empirical insight: In *Clash* and *Indoor Parliament*, familiarity fostered openness and humor, easing dialogue. *Street Parliament* mixed friends and strangers, where short warm-up games helped build rapport. In *Tactic Dice*, newcomers risked exclusion unless facilitators intervened. *Tactic Card* sessions in schools exposed strong internal hierarchies—dominant voices overshadowing quieter peers. Across prototypes, familiarity supported ease but limited diversity, while unfamiliar groups—though slower to start—often produced more reflective and balanced conversations.

10.1.3.6 Player Diversity

Definition: Player diversity refers to the range of social, cultural, and experiential backgrounds through which participants interpret and communicate about landscapes. From a social constructivist view, diversity expands the pool of meanings and narratives that can emerge, revealing how different groups construct and contest what a landscape represents or should become. ↔ See Sections 7.4.4.6, 9.4.3.2.2, and 10.1.3.6.

Design advice: Composition matters. Diverse groups bring contrasting perspectives that spark negotiation and collective learning, while homogeneity may ease interaction but flatten meaning-making. Curate participant mixes intentionally: use facilitation to bridge reasoning styles and maintain psychological safety across differences. In uniform settings, integrate role-play or provocative prompts to simulate absent perspectives and sustain discursive depth.

Empirical insight: Across *Urbanity*, diversity determined communicative richness. In *Street Parliament*, social, economic, and geographic variety encouraged grounded, inclusive debate—issues like accessibility and safety arose from lived experience. *Parliament* sessions thrived on contrasting viewpoints that expanded understanding. Conversely, *Tactic Card*'s school groups reached consensus too easily, their shared context muting disagreement.

10.1.3.7 Physical Characteristics

Definition: Physical characteristics refer to players' bodily attributes—such as mobility, height, or appearance—that influence spatial positioning, visibility, and communicative confidence. These physical differences shape who feels empowered to speak, who is noticed, and how participation unfolds within the group. ↔ See Sections 7.4.1.4 and 10.1.3.7.

Design advice: Acknowledge that the body itself mediates communication. Physical attributes affect not only access but also perceived authority and comfort. Plan spatial layouts and facilitation strategies to accommodate mobility, height, and gesture—ensuring players can see, hear, and engage equally. Depending on intent, use space either to balance or to highlight difference, but do so consciously and with care.

Empirical insight: In *Street Parliament*, standing circles at first excluded wheelchair users, prompting spontaneous reconfiguration to restore inclusion. During debates, height subtly shaped authority—taller participants dominated, while shorter ones hesitated. Facilitators adapted by crouching or repositioning to equalize eye levels, helping reestablish comfort and confidence. Across sessions, such micro-adjustments proved essential: inclusive physical arrangements and embodied awareness were preconditions for equitable, emotionally safe communication.

10.1.3.8 Player Engagement

Definition: Player engagement is the emotional and cognitive investment that draws participants into play. It grows through curiosity, anticipation, and the shared making of meaning—conditions that determine how actively and authentically players contribute to small-group communication. ↔ See Sections 6.4.2.1, 7.4.4.9, 7.4.6.2, 8.4.3.2, 9.4.3.2.1, and 10.1.3.8.

Design advice: Design for meaningful rather than mechanical excitement. Link emotional tension—uncertainty, surprise, humor, or competition—to the communicative goals of the game. Avoid overstimulation or spectacle that displaces dialogue. Instead, embed engagement in interaction itself: moments of discovery, recognition, or negotiation that make conversation rewarding.

Empirical insight: Across *Urbanity*, engagement arose when emotion and reflection intertwined. In *Clash*, unpredictability and the gong's rhythm fostered curiosity and attention. *Parliament*'s multiple viewpoints generated surprise and self-recognition. Adolescents in *Tactic Card* were driven by argument and persuasion, while *Tactic Dice* shifted between tactical risk, expressive debate, and collaborative construction. When excitement aligned with players' social needs and reasoning styles, dialogue deepened; when it did not, attention splintered.

10.1.3.9 Player Authenticity

Definition: Player authenticity refers to the degree to which communication reflects players' genuine thoughts, feelings, and intentions. Drawing on Habermas's concept of sincerity, it concerns whether exchanges are authentic and

personally meaningful, or distorted by competition, conformity pressure, or strategic gameplay. ↔ See Sections 9.4.2.2 and 10.1.3.9.

Design advice: Design for sincerity instead of performance. Competitive or consensus-driven rules can make players act strategically or conform to group norms. Create smaller settings, reflective prompts, and scoring that reward openness and nuance rather than alignment. Authentic dialogue needs safety and time—it emerges when players can express uncertainty or disagreement without consequence.

Empirical insight: In *Tactic Card*, team-based scoring and consensus incentives often pushed players to mirror teammates' answers, reducing genuine reflection. Authentic moments surfaced when disagreement was welcomed or personal reasoning felt relevant. These cases show that sincerity depends less on individual character than on design choices—games must value honest expression as much as resolution.

10.2 Facilitation Guide: Key Tasks for Supporting Small-Group Communication in Serious Participatory Landscape Games

The *Facilitation Guide* outlines nine facilitation tasks that proved critical for sustaining inclusive and meaningful communication during gameplay of the *Urbanity* prototypes (Sections 10.2.1–10.2.9). These tasks show how facilitation in serious participatory landscape games actively shapes the communication environment for small groups—structuring, guiding, and sustaining interaction to support problem-solving and decision-making processes consistent with the game's communicative goals and intentions.

Each task is presented through a consistent three-part structure: definition (what the task entails), facilitation advice (how to apply it effectively), and empirical insight (how it played out in the *Urbanity* sessions). Together, these entries provide a framework for facilitating communication-centered gameplay that remains both structured and adaptive.

10.2.1 Preparing the Communication Setting

Definition: Preparing the communication setting involves selecting and arranging the physical and environmental conditions before gameplay begins. This includes choosing suitable locations, organizing layout, and anticipating factors such as noise, weather, and comfort to enable focused, inclusive, and sustained small-group communication. ↔ See Sections 7.4.8.1 and 10.2.1.

Facilitation advice: Choose environments that serve the game's communicative goals. Indoors, focus on composition: ensure visibility, spacing, and stable setups for attention and turn-taking. Outdoors, prioritize adaptability—anticipate noise, heat, or distraction, and stay ready to adjust layouts on the fly. Facilitation begins before play: preparing space already shapes communication.

Empirical insight: Facilitators' spatial decisions shaped how discussion unfolded. In *Clash*, *Rulebook* and *Indoor Parliament*, they arranged circles, tables, and seating to guide attention and signal participation. In *Street Parliament*, preparation meant constant adaptation—moving boards into shade, tightening circles against noise, or shifting position to recapture focus. In *Tactic Dice*, facilitators learned to secure stable seating and control visibility so everyone could follow play. Across contexts, preparation was about ensuring communication could start—and stay—coherent.

10.2.2 Enforcing Game Rules

Definition: Enforcing game rules refers to the facilitator's task of maintaining the communicative structure intended by the game design. In serious participatory landscape games, rules are not merely procedural—they define who speaks, when, and how dialogue unfolds. Facilitators safeguard this balance between order and openness. ↔ See Sections 6.4.5.1 and 10.2.2.

Facilitation advice: Understand not only what the rules are but why they exist—what interaction patterns they're meant to create. Present them clearly and uphold them in ways that support inclusion and flow. Intervene when rules drift or distort dialogue; apply flexibility only when it strengthens engagement. Rule enforcement succeeds when it preserves the communicative rhythm the game was designed to evoke.

Empirical insight: Across *Urbanity*, facilitators who understood the communicative purpose of rules guided interaction most effectively. In *Clash* they protected rhythm and turn-taking with minimal cues. In *Parliament*, gradual rule introduction sustained deliberation. When rules were treated as mere procedures, discussion fragmented; when intent was upheld, it stayed fair, focused, and alive.

10.2.3 Adapting to Player Needs

Definition: Adapting to player needs refers to the facilitator's role in adjusting communication structures to match participants' backgrounds, capacities, and interaction styles—so everyone can participate meaningfully without losing the game's communicative intent. ↔ See Sections 7.4.8.2, 9.4.7.1, and 10.2.3.

Facilitation advice: Observe how players respond—verbally, physically, and emotionally—and tune the communication frame accordingly. Simplify or expand prompts as needed; adjust pacing to match group rhythm. Younger players may need tangible cues or shorter turns; experts, more complexity. The aim is a communicative space where everyone contributes authentically within their capacity.

Empirical insight: Across *Urbanity*, adaptive facilitation kept dialogue inclusive. In *Clash*, non-verbal play allowed mixed ages to join easily. *Parliament* used storytelling for children and structured argumentation for teens, while adults benefited from pacing shifts. *Tactic Dice* suited experts once prompts

matched analytical depth. **Tactic Card** required extra support for quieter students and timing adjustments for large groups. Effective adaptation balanced accessibility and challenge, letting all participants follow and shape the communicative flow.

10.2.4 Managing Transitions

Definition: Managing transitions refers to the facilitator's responsibility for pacing and coordinating shifts between communication phases, helping players adapt to new roles, formats, or spatial configurations. ↔ See Sections 6.4.5.2 and 10.2.4.

Facilitation advice: Structure transitions clearly and make them visible. Use cues—sounds, countdowns, gestures—to signal phase changes and help players reorient. Support role or position shifts, especially in complex steps. Intervene when energy drops or confusion rises. Smooth, well-paced transitions sustain focus and keep communication coherent.

Empirical insight: In **Clash**, facilitators used gongs and cues like *party time* to move players through pairing, silent exchange, debate, and consensus phases. In **Parliament**, they coordinated shifts between team discussions, delegate forums, and plenary debates—helping players reposition physically and socially. **Tactic Dice** required constant coordination as duels turned into debates or votes, often triggered by dice rolls. **Tactic Card** began with structured duels, so facilitators guided players toward collective deliberation. Across prototypes, clear transition management minimized confusion, reinforced roles, and maintained collective rhythm.

10.2.5 Facilitating Discussion and Debate

Definition: Facilitating discussion and debate refers to the facilitator's role in enabling inclusive, balanced, and constructive group dialogue. This includes moderating turn-taking, supporting diverse expression styles, and maintaining neutrality so all players are heard and exchanges stay meaningful. ↔ See Sections 7.4.8.3 and 10.2.5.

Facilitation advice: When dialogue is not fully governed by game mechanics, set clear expectations for tone and participation. Adapt to different communication rhythms—support quick thinkers while leaving time for reflective speakers. Step in when dominance, silence, or confusion emerge, and diffuse over-politicization or tension. If playing alongside others, avoid opinions that could steer the group. Neutral facilitation sustains trust, fairness, and autonomy.

Empirical insight: In **Clash**, no verbal moderation was needed—players communicated through structured yes/no exchanges. In **Parliament**, facilitators balanced speaker styles and eased political friction during debates. **Tactic Dice** sessions showed that without guidance, discussion could drift into partial or aimless talk. **Tactic Card**, facilitators encouraged sincerity, invited

counterarguments, and helped players develop both yes and no positions—broadening perspective and maintaining thoughtful dialogue.

10.2.6 Encouraging Diverse Perspectives

Definition: Encouraging diverse perspectives refers to the facilitator’s role in sustaining inclusive debate by prompting participants to consider alternative viewpoints and broadening discussion when it becomes narrow or one-sided. ↔ See Sections 8.4.9.1 and 10.2.6.

Facilitation advice: When discussion stalls or converges too quickly, use prompts that open new angles without imposing opinions. Ask layered questions that introduce legal, ethical, or social aspects—especially in homogenous groups or with deceptively simple topics. Actively invite quieter voices and overlooked standpoints to keep the exchange balanced, reflective, and engaging.

Empirical insight: In *Tactic Dice*, players often struggled with abstract prompts like *Is graffiti art?* or *Should there be a car-free day in the city?* Facilitators reframed such topics—for instance, expanding “dog poop penalties” into a wider debate about regulation and shared responsibility—to move discussion beyond surface responses. In *Tactic Card*, facilitators prompted exploration of both yes and no arguments, alternating prompts to maintain balance and variety. These interventions diversified reasoning, deepened reflection, and turned limited exchanges into genuine deliberation.

10.2.7 Sustaining Engagement

Definition: Sustaining engagement refers to the facilitator’s adaptive interventions that preserve motivation, focus, and participation. By refreshing energy and preventing passivity, this task keeps small-group communication lively, inclusive, and responsive. ↔ See Sections 6.4.5.3 and 10.2.7.

Facilitation advice: Track player energy and attention throughout play. When passivity appears—through silence, withdrawal, or dominance—adjust pacing, reframe prompts, or modify structure. Introduce light surprises, altered rules, or small shifts in rhythm to rekindle attention. Support quieter voices through encouragement or new roles. Keep participation active yet voluntary, maintaining a communicative flow that feels both inclusive and self-driven.

Empirical insight: In *Clash*, facilitators used the *earthquake* mechanism—signaled by accelerating the gong rhythm—to break patterns and revive energy. In *Parliament*, adjusting rules helped hesitant players contribute. *Tactic Dice* debates were reanimated by reframing questions beyond consensus. In *Tactic Card*, facilitators encouraged reticent players to use debate cards, helping them join dialogue. Across prototypes, such timely interventions prevented stagnation and sustained participation—showing that engagement depends less on intensity than on rhythm and responsiveness.

10.2.8 Concluding with Reflection

Definition: Concluding with reflection refers to the facilitator's role in leading post-game discussions that help players process experiences, connect gameplay to broader themes, and consolidate shared insights. ↔ See Sections 7.4.8.4, 8.4.9.2, and 10.2.8.

Facilitation advice: Always leave time for structured debriefing. Invite players to reflect on what unfolded, discuss surprises, and link outcomes to real-world contexts. Use visual or spatial summaries—such as revisiting constructions or mapping decisions—to anchor reflection in shared experience. Encourage open feedback to refine both facilitation and design. A strong conclusion reinforces learning and strengthens collective understanding.

Empirical insight: In *Tactic Dice*, skipping reflection made the built city feel decorative, weakening collective closure. In *Parliament*, spontaneous debriefs exposed confusion around scoring, prompting clearer walkthroughs and reflection prompts in later sessions. During one game, facilitators guided a reflective walk around constructions, helping players recall arguments and recognize consensus. These moments transformed gameplay from activity into dialogue—turning experience into shared meaning and insight.

10.2.9 Documenting and Sharing Insights

Definition: Documenting and sharing insights refers to the facilitator's role in recording, organizing, and transmitting facilitation strategies so others can adapt the game effectively and sustain inclusive communication. ↔ See Section 9.4.7.2 and 10.2.9.

Facilitation advice: Treat documentation as an active part of facilitation, not an afterthought. Record what worked, what failed, and how adaptations were made for different groups or settings. Use reflection sheets, annotated rulebooks, or brief debrief talks among facilitators to exchange insights. Shared documentation builds continuity, helping future facilitators refine gameplay, maintain communicative quality, and strengthen learning outcomes.

Empirical insight: In *Tactic Card*, experienced facilitators improvised rules and formats fluidly, but undocumented adaptations limited transfer. New facilitators struggled to reproduce earlier successes. Recognizing documentation as a facilitation task preserved experiential knowledge, supported continuity, and ensured that inclusive communication practices evolved rather than restarted with each session.

11

Communication Pattern Analysis Method

This chapter consolidates the methodological contribution of the research by developing a *Communication Pattern Analysis Method*—a visual framework for examining how small-group communication unfolds in participatory landscape games. Addressing Aim 2, it builds on the cross-case analysis of the four **Urbanity** prototypes (**Clash**, **Parliament**, **Tactic Dice**, and **Tactic Card**) to create a transferable approach for analyzing the temporal and spatial dimensions of interaction.

Section 11.1 synthesizes cross-case findings on temporal structuring, spatial organization, communication patterns, and facilitation roles, highlighting recurrent mechanisms that shape dialogue during gameplay. Sections 11.2 formalizes these insights into a visual language that defines the analytical elements and conventions of the *Communication Pattern Analysis Method*.

Together, these sections establish a methodological foundation for visualizing and comparing communication processes in serious participatory landscape games—offering researchers, designers, and facilitators a tool to observe, interpret, and refine how small-group interaction is structured and experienced.

11.1 Cross-Case Analysis of the Visual Analysis Method

The cross-case analysis of the four **Urbanity** prototypes (**Clash**, **Parliament**, **Tactic Dice**, and **Tactic Card**) provided the testing ground for developing the *Communication Pattern Analysis Method*. By comparing how communication unfolded in each prototype, the analysis identified recurring mechanisms linking game design, facilitation, and the spatial-temporal structure of interaction.

Each prototype served as an experimental setting for testing and refining the visual framework. The within-case studies examined how the method performs in distinct design and facilitation contexts, while the cross-case synthesis assessed what it can reveal across different configurations of gameplay. This step thus validated the framework's consistency and clarified its analytical and diagnostic potential for understanding small-group communication in participatory games.

Findings are organized around four analytical dimensions, each discussed in the following subsections: temporal structuring (Section 11.1.1), which examines how interaction evolves through steps, snapshots, and loops; spatial structuring (Section 11.1.2), which analyzes how the game board, game space, and communication zones shape communication; landscape communication patterns (Section 11.1.3), which explore how landscape topics and values are voiced, contested, and transformed; and facilitator roles (Section 11.1.4), which address how moderation practices regulate rhythm and equity.

Together, these comparative insights form the empirical foundation for the visual language developed in Sections 11.2–11.2.3, demonstrating how varied design and facilitation choices generate distinct yet comparable communication logics in serious participatory landscape games.

11.1.1 Temporal Structure: Steps, Snapshots, and Looping Rhythm

Temporal structuring examines how interaction unfolds across time through steps, snapshots, and loops, revealing how temporal design shapes communicative rhythm and depth.

Across the four prototypes, all gameplay relied on a step-based temporal logic, where each step represented a distinct stage of interaction defined by a specific rule or communicative focus. The number and length of steps varied: **Clash** and **Tactic Card** contained three to four steps, producing short, predictable cycles, while **Parliament** and **Tactic Dice** extended to five and six, layering debate and voting that stretched the temporal span of interaction. Longer sequences correlated with slower pacing and greater complexity.

Within each step, snapshots captured the smallest observable moments of communication—single exchanges, turns, or actions showing how interaction unfolded internally. Games with few snapshots, such as **Clash**, compressed communication into rapid yes/no exchanges, resulting in fewer observable interaction moments, while **Parliament** and **Tactic Dice** contained extended sequences visualizing argumentation, negotiation, and collective reasoning. **Tactic Card** maintained a balanced rhythm, with moderately dense snapshots sustaining reflection without slowing play.

Finally, loops connected steps into cyclical structures governing the game's rhythm. Snapshot-level loops created repetition within a single step, reinforcing rhythm and cohesion. In **Clash**, this occurred in **Step 2: Rhythmic Random Encounters**, where players rotated right until two holding the same opinion met in party time, sustaining engagement through movement and anticipation. In **Parliament**, a similar rhythm appeared in **Step 2: Opinion Clash in Teams**, where teams repeatedly tested questions until one gained consensus, slowing tempo but deepening focus.

Step-level loops, by contrast, restarted full gameplay rounds and increased temporal and cognitive complexity. In **Parliament**, unresolved clashes cycled through **Step 3** → **Step 4** → **Step 5** → **Final Step** → **Step 3**, transforming disagreement into structured deliberation before launching a new round. **Tactic Dice** featured several such loops returning to **Step 3: Opinion Clash of Duelists** (from **Steps 3, 5, and 6**), creating procedural richness but also repetition and overload. **Tactic Card** deliberately simplified this logic, retaining both loop types but limiting their frequency to ensure smoother, more reflective pacing.

In sum, snapshot-level loops sustained rhythm and cohesion, while step-level loops governed replay and iteration. Multiple loops increased complexity but

risked overload, whereas simpler designs, such as *Tactic Card*, supported focus and deliberate reflection.

11.1.2 Spatial Structuring: Communication Zones and Spatial Activation

Spatial structuring examines how interaction unfolded across physical space through the game board, game space, and communication zones, revealing how spatial design shaped inclusivity, visibility, and focus.

The game board, as the physical anchor of interaction, provided a shared visual and material focus for communication. In *Clash*, a set of bowls defined separate encounter points where pairs could meet, while the central construction area—activated only in the *Final Step*—served as a visible record of progress. Most dialogue, however, occurred around the bowls rather than on the board itself, producing a dispersed and movement-based communication environment. In the later prototypes (*Parliament*, *Tactic Dice*, *Tactic Card*), a new board appeared: a vinyl sheet depicting an abstract city with six grey magnetic panels symbolizing thematic buildings. Players stood around it, adding colored markers when reaching agreement. Indoors, this setup created a balanced circular dialogue, but outdoors—particularly in *Street Parliament*—the distance shaped by the layout proved too large for easy hearing in noisy conditions, leading players to cluster on one side of the board and altering the intended geometry of interaction.

The game space, the broader field for movement and positioning, refers to the area where communication unfolds under the rules of play—the dynamic environment activated by the game's procedures and the players' movements. It is distinct from both the board and the wider setting. *Clash* generated the widest, most mobile game space as players rotated around distant bowls, while *Street Parliament* compressed it into a single-sided formation. These contrasts show how the scale and adaptability of the game space shaped the balance between energy and coherence.

The communication zones, temporary sub-areas within the game space, marked who could speak or act at any given time. *Clash* activated parallel dyadic zones, leaving others as silent observers. *Parliament* gradually expanded these—from team-level exchanges to delegate forums and collective debates—while *Tactic Dice* continually expanded and contracted them across different configurations (team *opinion clashes*, duelist forums, cross-team *debates*, and full-group *voting*), requiring facilitation to sustain coherence. Games that restricted zones to pairs or representatives limited participation, whereas those maintaining open, full-group zones (*Street Parliament*, *Tactic Card*) supported more dialogic and collaborative interaction.

11.1.3 Landscape Communication Patterns

Landscape communication patterns describe how small groups exchanged and negotiated landscape-related meanings during play—who spoke to whom, in

what direction, and with what content or purpose. These patterns, visualized in the analysis diagrams through arrows, nodes, and topical markers, reveal how the games structured both the flow and the substance of communication, showing how messages circulated and how players expressed or revised their stances on landscape issues.

Across prototypes, the shared communicative foundation was the *opinion clash*, unfolding as follows: a player read a landscape-related question (pulse) aloud, and on the count of three all players involved—whether team members, delegates, or the whole group—simultaneously expressed their stance: “yes” (by saying “yes” or raising a hand) or “no” (by saying “no” or squatting). This synchronized act made individual positions immediately visible and created a rhythmic pulse of interaction that framed every new topic.

In **Clash**, this exchange remained purely verbal, lasting only a few seconds, and communication about landscape issues ended at that point. In **Parliament**, the same mechanism became the entry point to longer discussion, and new communication patterns began to emerge. Instead of pairs, entire teams clashed in **Step 2**, and the same method was repeated among their delegates in **Step 3**. This sequence gave rise to several new patterns: *defense speech*, where the delegate of the questioning team addressed all other players to argue for the team’s position (particularly visible in the **Indoor** and **Street Parliament** variants), and *open debate*, allowing participants to justify, challenge, and refine positions through spontaneous exchange. *Voting* also developed into a distinct communication pattern—a collective *opinion clash* carrying symbolic weight as a decision-making act on the landscape question.

Tactic Dice retained the *opinion clash* but multiplied its occurrences across several steps—within teams, between duelists, and among cross-teams—while also introducing *open debate* and *voting*. **Tactic Card**, though maintaining the *opinion clash* between teams (**Step 2**), introduced a new structured format: the *structured debate*, moderated by the facilitator, in which for and against arguments were voiced alternately (**Step 3**).

In sum, the *opinion clash* remained the defining communication pattern across all prototypes, but each placed it in a different context—within teams, between representatives, among duelists, or in collective *voting*. Alongside it, additional patterns emerged—*defense speech*, *open debate*, *structured debate*, and *voting*—together expanding the expressive and deliberative potential of communication about landscape issues.

11.1.4 Facilitator Role

Facilitation shaped how communication unfolded—structuring interaction, ensuring flow, and safeguarding inclusivity. Across prototypes, facilitators supported gameplay through multiple tasks, from preparing the communication setting to moderating discussion and sustaining engagement. Their visibility increased as the games evolved, shifting from procedural coordination to active mediation of communication.

In **Clash**, facilitation remained almost entirely structural. Facilitators introduced rules, managed time, and signaled transitions between steps but did not intervene in players' exchanges. In **Parliament**, facilitation expanded both in scope and function. As new communicative patterns emerged—*defense speech* and *open debate*—facilitators took on more active roles: coordinating team and delegate turns, balancing speaking time, and supporting hesitant players. Particularly in **Street Parliament**, outdoor noise and uneven spatial conditions demanded constant adaptation: facilitators rearranged groups, repeated questions, and maintained attention across the open setting.

Tactic Dice intensified facilitation demands. Its multiple steps and loops required procedural control and communicative awareness to keep gameplay coherent. Facilitators alternated between timekeepers and mediators, clarifying rules, prompting reflection, and re-engaging participants after chance-driven disruptions. By contrast, **Tactic Card** integrated facilitation directly into the game's communicative logic. **During Step 3: Structured Debate**, facilitators moderated alternating pro and contra arguments, managing tempo, tone, and inclusion. Here, the facilitator was no longer external to communication but visibly present within it—an active agent shaping the dialogue itself.

Across the four prototypes, facilitation evolved from structural regulation to communicative moderation. Early games relied on facilitation to fill design gaps, while later versions deliberately embedded facilitation as part of the communicative environment. As the Communication Pattern Analysis shows, by **Tactic Card** the facilitator had become a visible node in the interaction network—a co-creator of communicative quality rather than its guardian.

11.1.5 Synthesis: Towards a Visual Analysis Method

The cross-prototype analysis shows that **Urbanity** functioned as a spatio-temporally structured communication environment, where design, facilitation, and player interaction intertwined to structure the communication process throughout gameplay and to generate distinct interaction patterns. Across all prototypes, interaction followed a step-based temporal logic, unfolded within spatially organized settings, led to different communication patterns among participants, and was mediated by facilitation that balanced rhythm, inclusion, and focus.

These findings revealed the need for a coherent analytical framework capable of capturing how communication evolves through time and space while accounting for the rules, spatial settings, and social roles that shape it. From this synthesis emerged three core analytical dimensions—temporal sequencing, spatial structuring, and communication patterns—that together describe how interaction unfolds within serious participatory landscape games.

The following section (11.2) develops these dimensions into a visual grammar: a method for representing the temporal flow, spatial configuration, and communicative relationships that define small-group interaction in gameplay.

11.2 Elements of the Communication Pattern Analysis Method

This section introduces the three analytical layers that together form the *Communication Pattern Analysis Method*: temporal sequencing (Section 11.2.1), spatial structuring (Section 11.2.2), and communication patterns (Section 11.2.3). Each describes a complementary way of visualizing small-group interaction, offering practical guidance for how to map time, space, and dialogue within gameplay.

11.2.1 Temporal Sequencing of Small-Group Communication

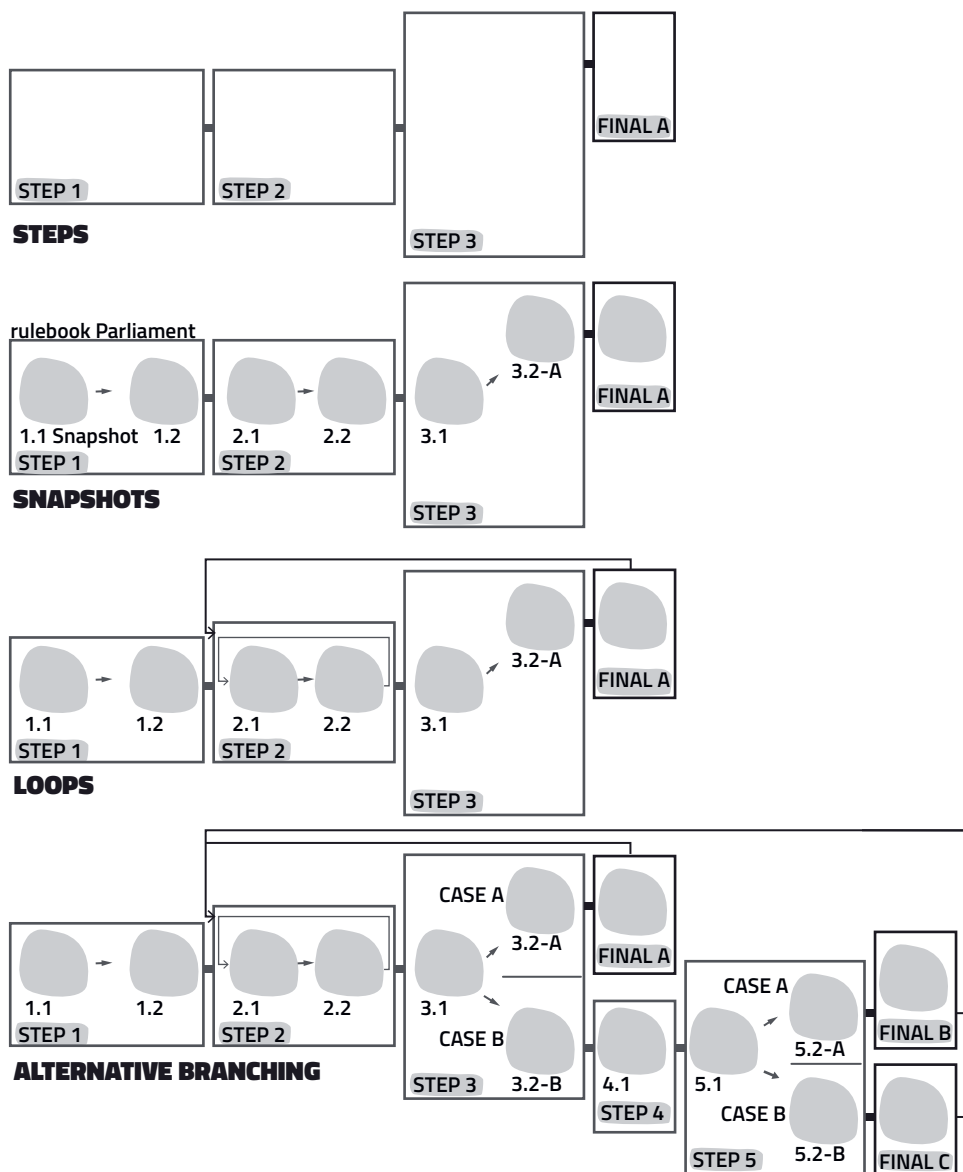


Fig. 11.1 Temporal sequencing of small-group communication. Graphic by the author.

Temporal sequencing shows how communication unfolds over time—how interaction evolves, diverges, or repeats during gameplay. It consists of four core elements that together form the temporal backbone of the visual method (see Fig. 11.1):

- **Steps:** Distinct gameplay phases such as pairing, debating, or voting. Identify them by observing shifts in rules, movements, or group configurations. Draw a grey frame for each step from left to right, label them sequentially (Step 1, Step 2...), and add short descriptive titles (e.g., Step 2: Pairing Players, Opinion Clash or Step 5: Voting). Connect adjacent frames with arrows to indicate progression and dependency between steps, emphasizing gameplay as a process rather than a set of isolated states. Highlight the final communicative step with a darker frame.
- **Snapshots:** The smallest observable moments of communication, such as asking a question, responding, or changing roles. Break down each step into these interaction moments to capture how communication unfolds in detail. Place snapshots inside the frames of each step, arranged from left to right. Connect adjacent snapshots with small arrows to indicate temporal progression within each step. Number snapshots using decimal notation (e.g., 1.1, 1.2, 1.3 within Step 1) and add brief labels to indicate tone or purpose (e.g., Snapshot 6.1: Reading the Question or 6.2: Simultaneous Responses).
- **Loops:** Returns to earlier moments in play that show repetition, reflection, or re-engagement. Use curved arrows to mark these cycles: thin lines for loops within a single step (across snapshots) and thicker lines for loops connecting different steps (e.g., Step 5 → Step 2). Arrows should start at the point of origin and end at the step or snapshot to which the interaction returns.
- **Alternative branching:** Points where interaction can take different paths based on player choices or outcomes. When a communication step can lead to several new steps—or when alternative snapshots appear within a step—use arrows to show the split in possible paths, thereby breaking the linear flow. Mark snapshot-level branches with letters (e.g., after Snapshot 3.1, draw two lines:: Case A → 3.2-A, 3.3-A and Case B → 3.2-B).

11.2.2 Spatial Structuring of Small-Group Communication

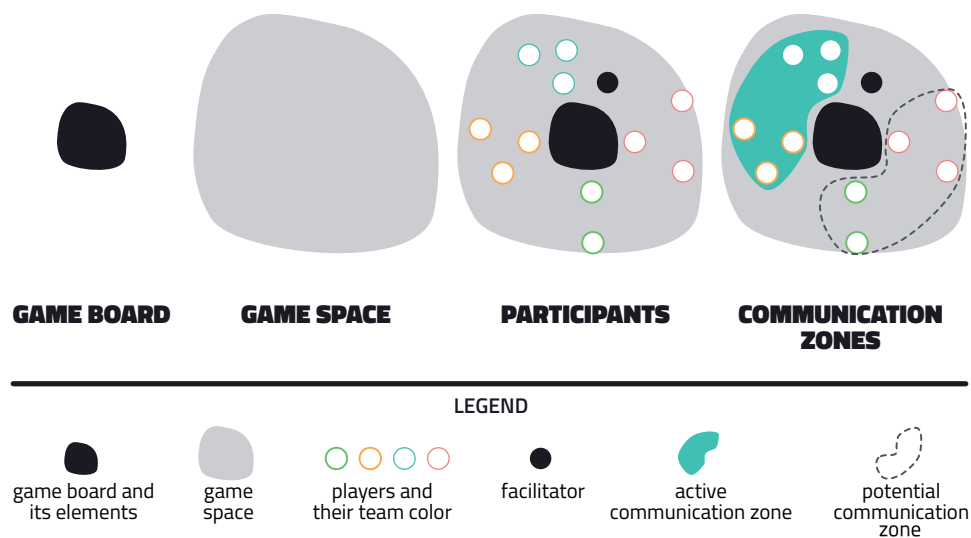


Fig. 11.2 Spatial structuring of small-group communication. Graphic by the author.

Spatial structuring shows how physical arrangement shapes the conditions under which participation and interaction may emerge—where players are positioned, how proximity enables or constrains access to others, and how potential communication spaces form (see Fig. 11.2):

- **Game board:** The central surface that anchors interaction and represents the landscape or issue under discussion. Identify its main elements—boards, bowls, cards, or other artefacts—that guide movement or focus. Draw the board as a solid black silhouette in the center of the diagram, using the same tone for any supplementary artefacts to emphasize their shared anchoring function.
- **Game space:** The surrounding area around the game board where game-play unfolds, i.e. the spatial aspect of the magic circle (Salen & Zimmerman, 2004c, p. 95) within which rules, roles, and actions apply. Define the active spatial field where players position themselves relative to the board and to one another. Represent it as a light grey area encircling the play surface, encompassing all players.
- **Participants (spatial actors):** All physically present actors within the game space, including players and facilitators, represented as white circles positioned according to their typical location during play. Minimal role differentiation may be indicated where it affects spatial access to interaction (e.g., facilitator versus player, marked in black). Where relevant, team affiliation may be shown through color to indicate spatial clustering and the potential formation of communication zones.
- **Communication zones:** Emergent sub-areas within the game space where interaction may form based on proximity, orientation, and spatial

grouping. Communication zones are defined by active inclusion in interaction: participants who may speak or listen are considered part of the zone, while observers fall outside it (Habermas, 1990b, p. 135). When inactive, these zones are shown with dashed outlines to indicate potential inclusion or exclusion from communication. When activated, they are filled with color—using team colors or the color of the focal issue—to mark moments of active interaction.

11.2.3 Communication Patterns in Gameplay

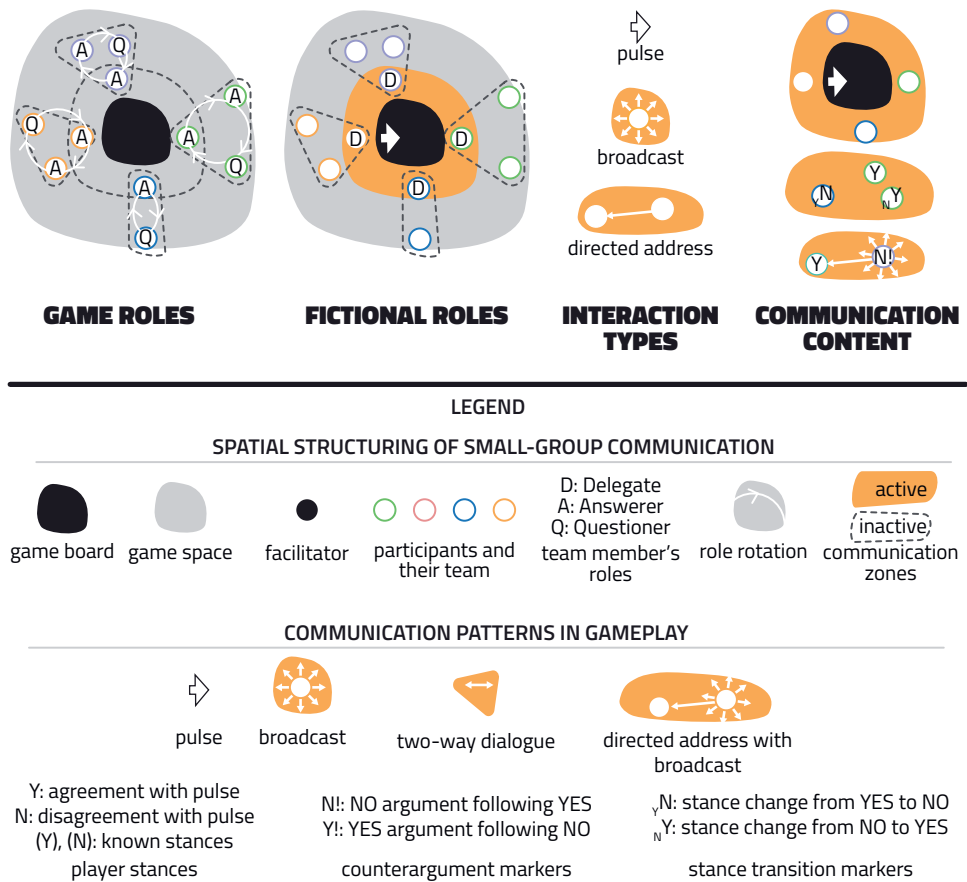


Fig. 11.3 Communication patterns in gameplay. Graphic by the author.

Communication patterns capture how interaction unfolds during play—how utterances are directed, received, and responded to over time. This layer focuses on interaction itself, building on the spatial configuration established earlier (see Fig. 11.3):

- **Game roles:** Rule-defined functions (e.g., delegate, questioner, duelist) or fictional roles (mayor, architect) that regulate who may speak, intervene,

or decide within interaction. Roles are marked with letters or symbols inside participant representations (e.g., F = facilitator, D = delegate, Q = questioner, A = answerer). Tracking role assignments across steps or snapshots reveals shifts in authority, initiative, and communicative responsibility.

- **Interaction types:** The formal direction and scope of communication, indicating how utterances are initiated and addressed within an active communication zone. Interaction typically begins with an initiating act that establishes a shared focus, followed by utterances oriented either toward all participants or toward specific individuals. The pulse symbol (Duke, 1974, p. 23) marks the act of initiating communication by raising a focal question or issue related to the game landscape. This initiating move triggers interaction and orients subsequent exchanges around a shared topic. Once interaction is underway, utterances may take the form of broadcast address, oriented toward all participants currently included in the active communication zone and marked with a sunburst symbol, or directed address, oriented toward a specific participant within the zone and shown with a single-headed arrow pointing from the speaker to the addressee.
- **Communication content:** The substance of what is expressed in interaction, including positions, arguments, or value claims, and how these evolve over time. Content markers are applied only to participants who actively contribute at a given moment, using base markers (Y/N) for yes-or-no positions, indices (YN/NY) to indicate change, and combined markers (e.g., D(Y)) to link roles with expressed positions. Punctuation or expressive symbols (e.g., “!” or “?”) may be added to convey emphasis, uncertainty, or affect (e.g., “N!”).

12

Theoretical Framing of Serious Participatory Landscape Games

This chapter presents the third and final synthesis of findings, addressing Aim 3 of the research. It develops a theoretical framing of participatory landscape games as communicative environments for democratic landscape governance, as envisioned by the European Landscape Convention (Council of Europe, 2000a). Building on the cross-case analysis of the *Urbanity* prototypes, the chapter explores how in-game communication can be interpreted through two complementary theoretical lenses—social constructivist landscape theory and communicative action theory—to explain how such games enable the co-construction of landscape meanings and actions.

Section 12.1 applies social constructivist landscape theory (Berger & Luckmann, 1966; Cosgrove, 1984; Kühne, 2018b, 2019b, 2019c) to interpret how *Urbanity* fosters the negotiation of shared landscape meanings. Section 12.2 draws on theory of communicative action (Habermas, 1984, 1990a) to assess how design and facilitation support equitable participation, reason-giving, and mutual understanding. Section 12.3 integrates these perspectives with Duke's (1974) concept of games as communicative environments, developing a unified theoretical framework for understanding serious participatory landscape games as intentionally designed settings that structure interaction and foster deliberative dialogue about landscape futures.

Taken together, these sections establish a conceptual lens through which serious participatory landscape games can be theorized as communicative environments that translate the European Landscape Convention's participatory vision into democratic practice.

12.1 Cross-Case Analysis through Social Constructivist Landscape Theory

This section develops the first strand of the theoretical reflection by analyzing how *Urbanity* supported the co-construction of landscape meaning during gameplay. It draws on the framework introduced in Section 4.4.2.3, where social constructivist landscape theory was presented as a core analytical lens.

Two analytical perspectives guide the cross-case interpretation: process of landscape meaning-making through communication (Section 12.1.1), which trace how players move through Kühne's (2015b, p. 29) five-step model of landscape construction and Berger & Luckmann's (1966) cycle of externalization, objectivation, and internalization during structured interaction; and Mediation of differentiated knowledge stocks through game structures (Section 12.1.2), which examines how participants' biographical, educational, and professional

knowledge resources are articulated, integrated, or filtered during gameplay, and how design and facilitation mediate their visibility and interaction (Berger & Luckmann, 1966, p. 56; Kühne, 2019b, pp. 61–64).

These perspectives are applied to the four **Urbanity** prototypes (Sections 6.5, 7.5, 8.5, 9.5), revisiting their findings through a theoretical lens to show how serious participatory landscape games structure the emergence, contestation, and stabilization of landscape meanings in small-group communication.

12.1.1 Processes of Landscape Meaning-Making through Communication

Across the **Urbanity** prototypes, the analysis revealed a consistent distinction in how players constructed and shared landscape meanings.

When considered through Kühne's (2015b, p. 29) five-step model of meaning-making (Section 3.3.4.2), the internal phases—Step 1, receiving stimulus from the physical space; Step 2, formation of the mental image; and Step 3, construction of the individually actualized landscape—occurred almost automatically in every prototype. Players quickly formed individual stances in response to prompts, indicating that perception and personal interpretation were consistently activated. However, the social phases—Step 4, projection and feedback within the social landscape; and Step 5, construction of socially shared meanings and appropriated physical landscapes—were far less stable. Their realization depended strongly on the communicative structures of each game: in formats emphasizing fast binary exchanges (e.g., **Clash**), projection and feedback remained fragmentary, while in more deliberative formats (e.g., **Parliament** or **Tactic Card**), extended cycles of dialogue allowed partial or full stabilization of shared meanings.

This empirical contrast aligns closely with Berger and Luckmann's (1966) model of social construction (Section 3.3.2), which complements Kühne's framework by explaining how personal meanings become socially stabilized and reintegrated through communication. Across the prototypes, externalization—the expression of personal meanings—was consistently strong, whereas objectivation, the stabilization of those meanings as shared understandings, depended on the presence of structured dialogue. Internalization, in turn, emerged only where extended deliberation and reflection were possible, allowing participants to reabsorb collectively shaped meanings into their own perspectives. These dynamics were not abstract but empirically traceable through the specific communication patterns that structured gameplay.

The following patterns, identified in the visual analyses, illustrate how each stage of meaning-making was supported or constrained across prototypes:

- **Opinion clash:** Dominant in **Clash** and present in all subsequent prototypes in modified forms. It most effectively triggered externalization, prompting players to take rapid yes/no stances and publicly express individual positions. However, its compressed timing left little room for

reasoning or negotiation, limiting the emergence of shared understandings and therefore constraining objectivation.

- **Defense speech:** Introduced in *Rulebook Parliament*, this format extended the process by allowing short persuasive monologues. While still largely one-directional, it initiated a transition from pure expression toward the first traces of shared meaning recognition, functioning as an early stage of objectivation.
- **Open debate:** Characteristic of *Indoor* and *Street Parliament*. These formats deepened interaction: players articulated, contested, and refined arguments through reciprocal projection and feedback cycles. This pattern fostered stronger collective anchoring of meanings and, in some cases, partial internalization as participants reported revising their views.
- **Structured debate:** Central in *Tactic Card*, where alternating turns and thematic debate cards ensured balanced participation and iterative reasoning. This pattern created sustained conditions for objectivation and supported limited internalization, particularly when discussions drew on lived or professional experience.
- **Competitive and chance-driven mechanisms:** Exemplified in *Tactic Dice* and the tactical duels of *Tactic Card*. These often disrupted the meaning-making cycle: random outcomes or strategic alignments fragmented dialogue and weakened continuity, preventing stabilization even when debates were rich.

Taken together, the prototypes illustrate a gradual progression: *Clash* activated externalization; *Rulebook* and *Street Parliament* supported objectivation through structured and open debate; and *Tactic Card* allowed the first signs of internalization. This evolution from fast, binary exchanges toward slower, dialogic formats marks a transition from momentary opinion expression to genuinely shared and reflected landscape meaning-making.

12.1.2 Mediation of Differentiated Knowledge Stocks through Game Structures

Across all four *Urbanity* prototypes, participants brought differentiated knowledge stocks shaped by their phases of primary, secondary, and tertiary landscape socialization (see Section 3.3.4.3; Berger & Luckmann, 1966, p. 56; Kühne, 2019b, pp. 61–64). Whether these resources became visible depended primarily on how game structures mediated expression. Rules of pairing, turn-taking, scoring, and thematic framing acted as filters that either enabled or constrained articulation.

- **Clash:** Participants, mostly professionals with tertiary landscape socialization, interacted through random partner rotation (→ see **Interaction Choice, Partner Selection**). This maximized diversity but fragmented continuity. Expression was reduced to synchronized gestures (→ see **Ritualized Expression, Communication Modes**), keeping expertise implicit.

- **Parliament:** The most socially diverse prototype, integrating students, residents, and professionals (→ see **Player Diversity**, **Player Age**, **Player Residency**, **Player Affiliation**, **Landscape Experience**). **Communication Rules**, responsive **Landscape Pulses**, and adaptive facilitation allowed all three landscape socialization phases to emerge and interact, transforming diversity into a constructive resource.
- **Tactic Dice:** Composed mainly of civic activists with tertiary landscape socialization, this prototype introduced **Tactical Dynamics** and **Scoring Systems** that filtered or destabilized knowledge articulation. Under consensus rules, divergence was suppressed; under non-consensus rules, diversity resurfaced but required stronger facilitation. Randomness weakened deliberative coherence.
- **Tactic Card:** Adults drew on primary, secondary, and tertiary landscape socialization, grounding arguments in biographical and professional resources (→ see **Player Affiliation**, **Landscape Experience**). Adolescents, still in secondary socialization, often relied on school or media framings, but deepened reasoning when prompts resonated with lived experience (→ see **Player Residency**, **Landscape Pulse**, **Landscape Experience**). *Structured debate with turn-taking* (→ see **Communication Rules**) enabled multiple voices, though homogeneous school groups produced shallow exchanges due to tactical play (→ see **Tactical Dynamics**).

Across prototypes, distinct communicative structures decisively shaped both the visibility and integration of differentiated knowledge. **Clash**'s partner rotation and non-verbal rhythm maximized encounter diversity but hindered reasoning. **Parliament**'s debate sequences enabled multi-perspectival exchange yet depended on facilitative balance. **Tactic Dice**'s tactical dynamics and scoring logic turned dialogue into strategy, filtering out embodied or experiential insight. **Tactic Card**'s structured turn-taking and resonant themes allowed knowledge diversity to surface, interact, and occasionally converge into shared understanding.

These outcomes reflect how the articulation of knowledge stocks relied on the interplay of communicative design strategies from the *Game Design Catalogue*—notably **Interaction Choice**, **Partner Selection**, **Ritualized Expression**, **Communication Modes**, **Communication Rules**, **Tactical Dynamics**, **Scoring System**, and **Feedback Mechanisms** (see Section 10.1.1)—and player attributes such as **Player Age**, **Player Diversity**, **Player Residency**, **Player Affiliation**, and **Physical Characteristics** (see Section 10.1.3).

Beyond these structural aspects, facilitation played a pivotal role in translating potential diversity into active dialogue. Adaptive facilitation (→ see **Adapting to Player Needs**) helped align communicative rhythm with participants' capacities; balanced moderation (→ see **Facilitating Discussion and Debate**) sustained deliberative exchange; and targeted prompting (→ see **Encouraging Diverse Perspectives**) ensured that professional, biographical, and experiential knowledges coexisted and enriched collective meaning-making.

In sum, the mediation of differentiated knowledge stocks in **Urbanity** depended on a dual mechanism: the structural logic of communicative design determined the opportunities for articulation, while facilitative intervention ensured that those opportunities became inclusive, dialogic, and reflexive. Together, they transformed static expertise into shared, negotiated landscape understanding.

12.2 Cross-Case Analysis through Communicative Action Theory

This section develops the second strand of the theoretical reflection by examining how **Urbanity** structured communicative interaction in light of Habermas's theory of communicative action, as outlined in Section 4.4.2.3, the focus is on the deliberative quality of in-game communication and its alignment with democratic ideals of inclusivity, mutual understanding, and non-coercion.

Three analytical perspectives guide the analysis: equitable participation (Section 12.2.1), which examines whether rules, turn-taking mechanics, and facilitation strategies ensured parity of voice and non-coercive inclusion; reason-giving procedures (Section 12.2.2), which assess whether the game scaffolded justification and critique (e.g., prompts, debate sequences) and whether players engaged with validity claims of truth, rightness, and sincerity; and coherence and depth of agreement (Section 12.2.3), which evaluate whether consensus was reached (through voting, assent, or persuasion) and whether it reflected convergence on shared reasons.

These perspectives are applied to the four **Urbanity** prototypes (see Chapters 6–9), revisiting findings through a theoretical lens to highlight how serious participatory landscape games create communicative spaces that resonate—or fail to resonate—with deliberative ideals.

12.2.1 Equitable Participation through Game Design and Facilitation

This section examines how equitable participation—a central principle in Habermas's theory of communicative action—was enacted across the **Urbanity** prototypes. Within each game, participation was understood as equitable when communication unfolded under conditions free from privilege, coercion, or exclusion. The cross-case analysis revealed that equality was never a fixed property of the game but a negotiated communicative condition, continually reshaped through the interaction of design, spatial context, player composition, and facilitation (see also the *Game Design Catalogue* and *Facilitation Guide* in Chapter 10).

Rather than appearing as a single design feature, participation equality manifested across seven interlinked layers—procedural, tactical, symbolic, spatial, social, physical, and facilitative—each capable of either reinforcing or counterbalancing power relations within communication.

1. **Procedural layer (structure, sequence, and access):** Procedural equality concerned how the formal structure of the game distributed opportunities to speak, listen, and decide. Hierarchies emerged through the sequencing of communication phases, the order of turns, and the rules governing access. In *Parliament*, the *defense-speech* rule gave one delegate extended rhetorical authority before others could respond. *Tactic Card* placed similar control in the hands of the player holding the debate card, who could determine whether reasoning occurred at all. By contrast, *Clash* removed sequential order through simultaneous yes/no gestures—formally equalizing participation but erasing space for response or reflection. *Tactic Dice* stood at the opposite extreme: anyone could speak at any moment, producing freedom but also dominance by louder voices. Procedural equality therefore depended less on the existence of rules than on how they structured reciprocity and response.
2. **Tactical layer (strategic play and communicative distortion)** Even when procedures appeared equal, tactical behavior—emerging from the interplay of rules, scoring, and competition—often introduced manipulation. Players sometimes used the system strategically to maximize points or recognition rather than mutual understanding. In *Tactic Dice*, participants selected like-minded duel partners to secure easy consensus, leaving opposing views unvoiced. These actions shifted interaction from communicative rationality toward instrumental rationality—where outcomes replaced understanding as the goal.
3. **Symbolic layer (messages of authority):** Objects, terminology, and metaphors silently encoded relations of power. In *Parliament*, the word “delegate” echoed representative politics, and *defense speech* reinforced speaker–audience divisions. In *Tactic Dice*, abandoning the authoritative *knobstick* in favor of dice transferred decision power from persons to chance, yet the term “duel” maintained competitive undertones of victory and defeat. *Tactic Card* softened these messages by replacing the confrontational *stuka* card with a debate card, reframing confrontation as structured exchange.
4. **Spatial layer (visibility, audibility, and reach):** Spatial configuration determined who could see, hear, and be heard. Circular formations in *Street Parliament* and *Tactic Card* supported parity through mutual visibility. The fishbowl layout of *Indoor Parliament* elevated inner speakers while rendering others passive observers. Outdoor sessions introduced new asymmetries: noise, distance, and distraction privileged those nearest the facilitator or central board. Equality within this layer required continual adjustment of layout and proximity so that communicative power was not dictated by space itself.
5. **Social layer (familiarity, confidence, and cultural access):** Pre-existing social relations filtered how equality was experienced. In *Street Parliament*, adults dominated discourse through vocabulary and perceived authority; in *Tactic Card*, classroom hierarchies made assertive students informal spokespersons. Familiar groups fostered comfort but reproduced

existing roles; unfamiliar ones began hesitantly yet reached better balance once trust developed. Topic accessibility also mattered: Budapest-centric prompts alienated rural participants until localized themes re-engaged them. Social diversity thus produced both friction and depth—depending on whether facilitation could protect difference from dominance.

6. **Physical layer (embodied presence and perceived authority):** Bodily difference subtly shaped who felt entitled to speak. Height, mobility, and vocal strength projected authority or restraint. In *Street Parliament*, taller or older participants appeared dominant, while seated or younger ones faded from exchange. Efforts to compensate for street noise—by raising one’s voice—sometimes appeared aggressive, illustrating how embodied adjustments could be misread as coercion. Attention to physical presence and gesture was therefore integral to communicative equality.
7. **Facilitative layer (mediation and redistribution of power):** Facilitation formed the final layer mediating equality. Responsive facilitation—adjusting rhythm, resequencing turns, or reframing prompts—actively countered imbalances emerging from other layers. Where moderation was absent or limited to enforcing rules, fairness extended only as far as the design allowed. Although facilitators aimed for neutrality, when they entered discussion as co-players their institutional authority re-emerged; their dual role in guiding and participating could easily overshadow others. Effective facilitation required constant awareness of when to step back and when to intervene to restore balance.

Across the *Urbanity* prototypes, equitable participation appeared as a multi-layered and continuously negotiated condition. Each layer—procedural, tactical, symbolic, spatial, social, physical, and facilitative—offered both the potential and the risk of hierarchy. For serious participatory landscape games, this implies that equality cannot be assumed or engineered by rules alone. It must be consciously produced through the alignment of design and facilitation, ensuring that structures of play, social interaction, and embodiment remain open to revision. Only when these layers are deliberately harmonized can participatory games approximate the Habermasian ideal of non-coercive, reason-based communication.

12.2.2 Reason-Giving Procedures through Game Design and Facilitation

This section examines how reason-giving—a fundamental dimension of Habermas’s theory of communicative action—was enacted across the *Urbanity* prototypes. Within each game, reason-giving referred to players’ capacity to justify, question, and revise claims in ways that engaged the three dimensions of communicative rationality: truth, rightness, and sincerity.

The cross-case analysis explored how various communication patterns (see also the results of the *Communication Pattern Analysis Method* in Chapter

11) supported—or constrained—these acts of justification, and how they were shaped by game design, spatial and social context, and facilitation (see also the *Game Design Catalogue* and *Facilitation Guide* in Chapter 10).

Rather than treating reasoning as a single behavior, the analysis traced the communicative patterns that structured it—*opinion clash*, *defense speech*, *open debate*, and *structured debate*—each carrying distinct implications for the articulation and testing of validity claims.

- **Opinion clash (ritualized expression without reasoning):** In *Clash* and the early rounds of *Parliament*, *Tactic Dice*, and *Tactic Card*, players expressed their stance on a yes-or-no question simultaneously—through gestures or brief verbal cues on the count of three. This *opinion clash* ensured formal equality yet suspended interaction: players disclosed their views (sincerity) but could not test truth or rightness claims. The result was rhythmic but closed communication—difference was performed rather than examined. This format illustrated how equality of turn-taking alone does not produce deliberation if response and justification remain structurally impossible.
- **Defense speech (persuasive reasoning and rhetorical asymmetry):** In *Parliament*, *defense speech* introduced justification. Delegates could present one convincing argument—drawing on factual, normative, or experiential grounds. However, the rule granting a single speaker the floor before any response created rhetorical asymmetry: reasoning emerged, but reciprocity was constrained. The format resembled persuasion more than dialogue as response rights were unevenly distributed.
- **Open debate (dialogic reasoning under contingent equality):** During the open-debate phases of *Indoor Parliament* and *Street Parliament*, reasoning became collective. Participants questioned, refined, and occasionally reframed each other's arguments. This was the communicative moment most closely resembling Habermasian discourse—where participants could test and redeem validity claims. Yet equality remained fragile: environmental noise, social confidence, and differing rhetorical skills repeatedly disrupted mutual access. Facilitation proved decisive: without active moderation, discussions reverted to competitive or performative exchanges. When well facilitated, however, open debate enabled temporary realization of the ideal speech situation—interaction oriented toward understanding rather than victory.
- **Structured debate (formalized deliberation through design and facilitation):** *Tactic Card* translated open reasoning into formal procedure. The presentation of the debate card started a debate process that required each side to present and justify its stance before a collective vote. This design explicitly structured reciprocity: justification and counter-argument became procedural obligations rather than optional gestures. Yet, because the debate card's activation was voluntary and the scoring system rewarded consensus, players often avoided confrontation. Thus,

deliberation was possible by rule but precarious in practice—revealing how institutionalized equality must still contend with motivational and cultural asymmetries.

- **Lifeworld anchoring (how landscape pulses grounded reasoning):** Beyond procedure, the *content* of communication determined whether argumentation became meaningful. When landscape pulses—the thematic prompts framing discussion—connected to participants’ lived experiences and spatial familiarity, reasoning deepened. In *Parliament*, everyday issues such as cleanliness or cycling infrastructure triggered both factual and moral reflection. In *Tactic Dice*, abstract prompts (*Is graffiti art?*) yielded brief, tactical exchanges. *Tactic Card* demonstrated that when topics related directly to players’ lifeworlds—safety, pets, fences, surveillance—reasoning became situated, emotional, and authentic. Across all prototypes, lifeworld connection defined the depth of rational argumentation: reasoning unfolded when landscape became shared experiential ground rather than an abstract problem.
- **Facilitation as the enabling condition for reasoning:** Where design offered structure, facilitation sustained communicative balance. Facilitators who adjusted pacing, encouraged quieter participants, and maintained neutrality enabled argumentation to evolve authentically. In *Parliament* and *Tactic Card*, facilitation transformed procedural symmetry into reflective dialogue. In *Tactic Dice*, its absence allowed tactical play to override deliberation. Facilitators thus acted as mediators between design intention and communicative reality—protecting the fragile space of reasoning from collapse into strategy, silence, or domination.

Across the *Urbanity* prototypes, reason-giving emerged as a fragile yet designable achievement. Each communicative form carried a distinct deliberative potential: *opinion clash* allowed sincerity without reasoning; *defense speech* enabled justification under rhetorical asymmetry; *open debate* supported reciprocal argument under contingent equality; *structured debate* formalized deliberation.

Paired up with lifeworld anchoring and facilitation, *Urbanity* prototypes demonstrated that rational argumentation can indeed occur within serious participatory landscape games—but only when design and facilitation are consciously aligned.

For serious participatory landscape games, communicative rationality cannot be assumed; it must be constructed. Design should define explicit phases for justification and counter-argument, craft prompts that connect to players’ lived landscapes, and balance incentives between consensus and exploration. Facilitation must preserve temporal rhythm, inclusivity, and neutrality so that reasoning remains both reflective and shared. Only through such alignment can serious participatory landscape games approach the Habermasian ideal of reason-based, non-coercive communication.

12.2.3 Coherence and Depth of Agreement

This section examines how different forms of agreement emerged across the **Urbanity** prototypes and how they reflected varying depths of deliberation.

According to Habermas, communicative understanding can take several forms. He distinguishes three deliberative depths of agreement—*Verständigung* (mutual understanding), *Einigung* (practical agreement), and *Einverständnis* (value-based consensus)—as well as two non-deliberative alignments: *Gleichgestimmtheit* (emotional resonance) and *Übereinstimmung* (opinion concurrence). These categories describe not only outcomes of rational argumentation but the quality of reasoning and mutual recognition through which such outcomes are reached.

The cross-case analysis explores when these forms of agreement arose, how game design and facilitation shaped them, and what this implies for developing serious participatory landscape games as deliberative environments.

1. **Emotional and intuitive alignment (*Gleichgestimmtheit* and *Übereinstimmung*):** These non-deliberative forms appeared most often in prototypes where expression was ritualized and reasoning absent. In **Clash**, agreement took the form of *Gleichgestimmtheit*—emotional resonance produced through synchronous gestures and rhythm—and *Übereinstimmung*, a momentary concurrence of opinions. Players' simultaneous yes/no responses created visible unity but without justification or dialogue. Early rounds of **Parliament**, **Tactic Dice**, and **Tactic Card** reproduced this expressive alignment: matching gestures and nods signaled cohesion, yet meaning remained implicit. These phases sustained engagement but substituted affective coordination for deliberation—communication through feeling rather than argument.
2. **Procedural agreement (*Einigung* through majority voting):** *Einigung* appeared when reasoning was followed by collective decision, often via voting. In **Parliament** and **Tactic Card**, open and structured debates concluded with a vote—formalizing closure while preserving traces of the preceding argument. Here, agreement was procedural but could still bear deliberative quality when participants had already exchanged reasons and reconsidered their positions. In such cases, the vote marked a practical conclusion to a communicatively grounded process.
3. **Deliberative consensus (*Verständigung* and *Einverständnis*):** Deeper, communicatively valid consensus emerged when discussion itself transformed the original question. In **Street Parliament** and certain **Tactic Card** sessions, debates extended until participants reframed the issue—proposing hybrid or compromise solutions that accommodated multiple views. In these cases, *Verständigung* (mutual understanding) was achieved through reciprocal justification, while *Einverständnis* (value-based consensus) appeared when participants recognized a shared normative basis for their conclusion. Such outcomes required both temporal openness and facilitative sensitivity: moderators who allowed

argument to evolve and encouraged reformulation helped groups move beyond majority logic toward shared conviction.

4. **Tactical alignment (agreement through strategy rather than reason):** In *Tactic Dice* and occasionally in *Tactic Card*, strategic play disrupted deliberation. Players aligned tactically—selecting like-minded partners, avoiding disagreement, or conceding prematurely—to maximize points or maintain social comfort. Such alignments produced apparent consensus without reflection: pseudo-agreement. Here, communication shifted from communicative to instrumental rationality; agreement became an artefact of calculation rather than understanding. These games revealed how easily structural incentives (e.g., scoring systems, time pressure, competitive framing) can steer discourse away from deliberative engagement toward strategic compliance.
5. **Facilitating communicative closure (aligning procedure and understanding):** Facilitators shaped not only how reasoning unfolded but also how closure was achieved. When they sensed that players were already adjusting their positions through dialogue, facilitators reformulated the modified question and proposed it for majority voting as a form of procedural closure. When no such transformation occurred, they retained the original question and proceeded to a vote on the original formulation. Post-game reflection rounds further deepened understanding by encouraging players to recall and articulate what they had heard from others, thereby making implicit interpretive shifts explicit. Through these adjustments, facilitation became a practical enactment of communicative sensitivity—recognizing when understanding had evolved and aligning procedural closure with the actual depth of agreement reached.

Across the *Urbanity* prototypes, agreement appeared not as a single endpoint but as a spectrum of communicative depth. Non-deliberative forms (*Gleichgesinntheit*, *Übereinstimmung*) offered expressive inclusion but lacked reasoning; *Einigung* provided procedural closure; *Verständigung* and *Einverständnis* marked the rare instances of mutual justification and value convergence. The prototypes showed that such outcomes were products of design and facilitation.

For serious participatory landscape games, coherence and depth of agreement depend on how closure is designed and facilitated. Game design should provide opportunities for both decision and synthesis—allowing votes to emerge from understanding rather than replacing it. Facilitation must recognize when emotional resonance, procedural efficiency, or strategic alignment risks substituting for reflection, and reorient players toward reasoning. Only through this conscious orchestration of game design and facilitation can serious participatory landscape games approach the deliberative ideal of consensus grounded in the force of better arguments.

12.3 Framing Serious Participatory Landscape Games as Communicative Environments for Landscape Meaning-Making and Communicative Action

REALITY OF EVERYDAY LIFE

(BERGER & LUCKMANN, 1966)

MAGIC CIRCLE

SALEN & ZIMMERMANN, 2004)

FINITE PROVINCE OF GAME PLAY

(BERGER & LUCKMANN, 1966)

CONDITIONS OF

COMMUNICATIVE ACTION

(HABERMAS, 1984)

process: equal and coercion free

procedure: structured, rational

outcome: agreement or consensus

GAMES AS FUTURE'S LANGUAGES

(DUKE, 1974)

language: game specific

communication technology: hybrid, interactive

interaction pattern: multilogue and more

SOCIAL CONSTRUCTION OF THE LANDSCAPE

(KÜHNE, 2018)

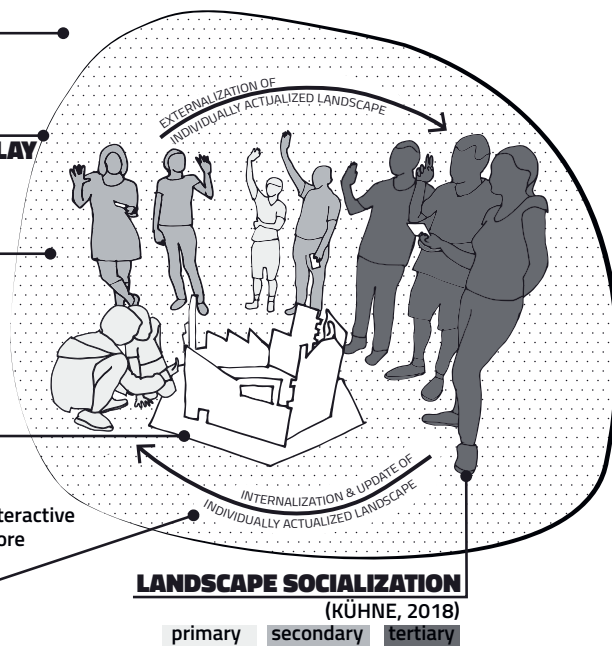


Fig. 12.1 Co-constructing landscape meanings communicatively through serious participatory landscape games. Graphic by the author.

This section develops the theoretical framing of serious participatory landscape games—serious games intentionally designed or adapted to engage individuals and groups in structured discussion, negotiation, and decision-making about landscapes (Szilágyi-Nagy, 2022). Their purpose is to facilitate dialogue and collective reflection in line with the European Landscape Convention (Council of Europe, 2000a), positioning them as environments for constructing landscapes communicatively.

Building on the cross-case analysis of the Urbanity prototypes, this framing synthesizes three complementary theoretical perspectives (see Chapter 3): games as communicative environments (Section 12.3.1), which interprets games as intentionally designed communication systems that structure communication and generate interaction through language, technology and interaction patterns (Duke, 1974); games as communicative environments for landscape meaning-making (Section 12.3.2), which explains how games enable the social construction and negotiation of landscape meanings through structured interaction (Berger & Luckmann, 1966; Cosgrove, 1984; Kühne, 2018b, 2019b, 2019c); and games as communicative environments for communicative action (Section 12.3.3), which clarifies how design and facilitation together can establish the normative conditions of deliberation—equality, reasoning, and consensus (Habermas, 1984, 1990a).

Together, these perspectives provide a theoretical foundation for interpreting serious participatory landscape games as communicative environments that enable the co-construction of landscape meanings through deliberative interaction (Section 12.3.4).

12.3.1 Games as Communicative Environments

Following Duke (1974, pp. xvi–xvii), serious participatory landscape games can be described as intentionally designed communicative environments—settings that structure and stimulate small-group communication. They translate the complexity of real-world landscape challenges into playable form, defining how participants exchange, negotiate, and validate meanings during collective problem-solving and decision-making. These games operate through a game-specific language, hybrid communicative technologies (both natural and artificial), and diverse interaction patterns such as *sequential dialogue*, *multilogue*, *opinion clash*, *defense speech*, and *open or structured debate* (Duke, 1974, pp. 19–23).

From the perspective of small-group communication theory (Beebe & Masterson, 2016; Ellis & Fisher, 1994; Frey et al., 1999; Hirokawa et al., 2003; Pavitt & Curtis, 1998; Shaw, 1981a), gameplay groups function as task-oriented groups: small collectives of three to twenty participants who share a specific purpose—solving a problem or making a decision—and who continuously influence one another’s perspectives. Their communication is structured—guided by rules, phases, and materials—while their interaction is generated dynamically through verbal, non-verbal, and artefact-mediated exchanges.

Game design and facilitation together shape this communicative environment. Design embeds procedures and feedback mechanisms that scaffold collaborative reasoning, while facilitation sustains and reinforce the intended communication goals of the game throughout play. Through this alignment of procedural structure and facilitative mediation, serious participatory landscape games become communicative environments of participatory processes—spaces where the act of playing itself embodies participation in landscape issues. Within these environments, small groups engage in structured dialogue oriented toward solving landscape problems or making collective decisions about landscape futures.

12.3.2 Games as Communicative Environments for Landscape Meaning-Making

Drawing on social constructivist landscape theory, serious participatory landscape games can be understood as small-group communication environments that enable participants to co-construct the meaning of landscape through face-to-face interaction (Berger & Luckmann, 1966; Cosgrove, 1984; Kühne, 2018b, 2019b, 2019c). As objectifications of socially constructed reality, these games are intentionally designed communication environments (Duke, 1974,

p. 58) that abstract elements of “everyday reality” (Berger & Luckmann, 1966, pp. 33–42) into playable models. Through design and facilitation, these abstracted models frame and mediate small-group dialogue about landscapes, defining how participants encounter, express, and negotiate meanings within a structured yet imaginative setting. The resulting game world constitutes a finite province of meaning (Berger & Luckmann, 1966, p. 39): a distinct communicative reality, spatially and temporally bounded by the magic circle (Salen & Zimmerman, 2004c, p. 95). Within this bounded and safe frame, interaction is guided not by everyday conventions but by the rules of the game, which regulate turns, roles, and forms of expression (Abt, 1987). Through these design and facilitation mechanisms, the game provides the communicative conditions under which collective landscape meaning-making can unfold.

Participants enter this environment with experiences shaped through primary (early life), secondary (educational and media-based), and tertiary (professional or expert-level) landscape socialization (Kühne, 2019b, pp. 61–64). These socialization phases define the symbolic, aesthetic, cognitive, emotional, normative, functional, and economic interpretive layers through which individuals perceive and interpret landscapes (Kühne, 2018b, pp. 59–60). Players therefore bring different forms of landscape knowledge—biographical memories, cultural images, professional concepts—into dialogue, forming differentiated knowledge stocks that shape how they communicate and reason during play (Berger & Luckmann, 1966, p. 56; Kühne, 2019b, pp. 61–64).

Within the communicative process structured by game design and facilitation, participants externalize, objectivate, and may internalize meanings (Berger & Luckmann, 1966, pp. 43–48), reflecting the cyclical process of landscape meaning-making (Kühne, 2015b, p. 29). Players externalize their perceptions of landscape through projection—drawing simultaneously on the Physical Landscape (material perception), the Social Landscape (shared cultural meanings), and the Individually Actualized Landscape (personal interpretations and emotions) (Kühne, 2008b, pp. 33–41; 2018b, Chapter 4; 2019b, pp. 7–10; Kühne et al., 2019, pp. 72–73). These projections enter feedback processes structured by the game’s rules and facilitation, which define what can be expressed, questioned, or reformulated, and how these exchanges unfold. Through feedback, individual perspectives are intersubjectively compared and selectively stabilized: certain interpretations gain temporary collective recognition within the group—no longer expressed as personal views but as shared references. This moment of provisional stabilization corresponds to objectivation within the Social Landscape. Finally, players may—or may not—internalize these collectively shaped understandings, updating their Individually Actualized Landscapes or reinterpreting the Appropriated Physical Landscape, the material environment imbued with newly shared meanings (Kühne, 2018b, pp. 64–67).

Serious participatory landscape games can thus be interpreted as intentional communicative environments for the face-to-face construction of landscape meaning within the social context of task groups entrusted with problem-solving or decision-making on landscape issues. Through design and facilitation,

they shape this process and mediate which meanings can be expressed, how they are contested, and to what extent they may be transformed. Through this lens, the games do not merely represent landscapes but enact the social construction of landscape within a designed communicative setting—showing how shared meanings emerge, are negotiated, and evolve through interaction.

12.3.3 Games as Communicative Environments for Communicative Action

Building on the theory of communicative action (Habermas, 1984, p. 25), serious participatory landscape games can be understood as intentionally designed communicative environments that approximate the conditions of communicative action. When consciously designed and facilitated toward this aim, such games create settings in which small groups can engage in rational argumentation—expressing, contesting, and testing validity claims of truth, normative rightness, and sincerity—with the goal of reaching intersubjective agreement grounded in the force of the better argument and coordinating shared understandings of landscape futures and the collective actions deemed necessary to realize them (Habermas, 1984, pp. 86, 99).

For this deliberative process to unfold, game design and facilitation must jointly construct and sustain the conditions of communicative action throughout play:

- **Equitable participation (process)**, ensuring that everyone capable of speech and action can take part on equal terms, free from hierarchy or coercion (Habermas, 1990a, p. 89).
- **Reason-giving procedures (procedure)**, creating structures that require participants to justify, question, and examine claims through reasons rather than persuasion or preference (Habermas, 1990a, p. 87).
- **Coherence and depth of agreement (outcome)**, enabling participants to reach mutual understanding (*Verständigung*), practical agreement (*Einigung*), or value-based consensus (*Einverständnis*) through the force of the better argument (Habermas, 1984, pp. 286–287).

These conditions are not fixed properties of a game but practically achieved states, continually produced through the deliberate alignment of procedural structure, socio-spatial setting, player interaction, and facilitative mediation—as illustrated in the *Game Design Catalogue* and *Facilitation Guide* (Chapter 10). Together, they represent the practical means through which gameplay can approach what Habermas termed the ideal speech situation—a hypothetical condition in which communication is entirely free from coercion, participants are equal in voice and opportunity, and only the strength of the better argument determines agreement.

The extent to which serious participatory landscape games approximate communicative action therefore depends on how design and facilitation structure the sequence of play, communication patterns, and decision mechanisms.

The closer these structures align with the conditions of equitable participation, reason-giving, and coherent agreement, the more likely gameplay will support rational argumentation and the deliberative negotiation of landscape meanings, futures, and actions.

12.3.4 Bringing Together: Constructing Landscapes Meanings and Actions Communicatively through Serious Participatory Landscape Games

Synthesizing these three perspectives—games as communicative environments, the social construction of landscape meanings, and the theory of communicative action—produces a unified theoretical framing for serious participatory landscape games. They can be seen as consciously designed and facilitated communicative environments that support participatory problem-solving and decision-making on complex landscape issues by structuring communication and generating diverse forms of small-group interaction toward these aims. Within their bounded magic circle, they create temporary arenas where players construct and negotiate meanings, test reasons, and seek agreement. The game thus both guides the communicative process and creates the conditions for the co-construction of landscape meanings and actions.

This involves two intertwined levels of meaning- and action-making:

- **Meaning-making**, which refers to the communicative environment's capacity to enable the expression, negotiation, and revision of landscape meanings. Through the game's structure, participants articulate experiences and knowledge stocks, compare them with others, and may integrate them into shared understandings.
- **Action-making**, which occurs when the communication environment approximates the conditions of communicative action: players engage in reason-giving on equal terms and reach collective decisions about what should be done—formulating shared orientations for landscape futures and the actions required to realize them.

This theoretical synthesis leads to the following definition: serious participatory landscape games are consciously designed and facilitated communicative environments that transform landscape issues into playable form and structure small-group interaction to support both the co-construction of meaning and the communicative action leading toward shared understanding of how to address landscape challenges. Through their design and facilitation, these games guide participants in expressing, contesting, and refining landscape perspectives—processes at the heart of constructing landscapes communicatively. When design and facilitation jointly fulfill the conditions of communicative action, they enable rational, inclusive, and non-coercive dialogue, fostering collective understanding of how landscapes should be interpreted, managed, and cared for.

This definition positions serious participatory landscape games as

communicative environments that realize the European Landscape Convention's participatory vision: "a collective democratic exercise whereby differences are accepted, common characteristics found, and operational compromises eventually reached" (Council of Europe, 2008, II.2.3.A).



Part VI.

Discussion and Conclusions

13

Discussion

This chapter discusses the findings of the research by revisiting them through three interrelated dimensions—practice, method, and theory—that together explain how serious participatory landscape games (Szilágyi-Nagy, 2022) can be designed, analyzed, and understood as communicative environments for democratic landscape governance.

The practice-oriented discussion (Section 13.1) focuses on the *Game Design Catalogue* and *Facilitation Guide*, examining how the design and facilitation of such games intentionally structure and generate small-group communication and participation. The methodological discussion (Section 13.2) introduces the *Communication Pattern Analysis Method*, a visual-analytic framework that makes the temporal and spatial dynamics of gameplay communication observable and comparable across cases. Finally, the theoretical discussion (Section 13.3) integrates these insights within a broader framework of communication, landscape, and democratic theory, defining participatory landscape games as communicative environments for the co-construction of landscape meanings and actions.

Taken together, these three perspectives—design and facilitation, visualization, and theoretical framing—demonstrate how participatory landscape games operationalize the European Landscape Convention’s participatory vision by structuring communicative processes, rendering them analyzable, and linking them to the democratic co-creation of landscape futures (Council of Europe, 2000a).

13.1 Practice: Designing and Facilitating for Small-Group Communication

This section discusses how the design and facilitation of serious participatory landscape games shape communication and participation in small groups. Following Duke’s (1974, pp. xvi–xvii) conception of simulation and policy games as communicative systems, the *Urbanity* prototypes demonstrate that small-group communication does not emerge by chance but is structured through deliberate design and facilitation choices. These games translate the complexity of real-world landscape challenges into playable form, defining who speaks, how ideas circulate, and how collective reasoning develops. In this way, serious participatory landscape games operate as dynamic communicative environments in which procedural rules, spatial arrangements, player characteristics, and facilitative mediation jointly shape the problem-solving and decision-making processes envisioned by the European Landscape Convention (Council of Europe, 2000a, Articles 1(d–f), 5(c), 6(C–D)).

The *Game Design Catalogue* (Section 10.1) distills thirty-two empirically grounded design factors that determine how communication unfolds in serious participatory landscape games. It organizes them into three dimensions—communicative design strategies, socio-spatial conditions, and player attributes—corresponding to Salen and Zimmerman’s (2004b) triad of *Rules–Culture–Play* as the main components of game design. From this perspective, designers do not create experiences directly but establish the conditions from which they emerge (Schell, 2020a, pp. 10–11). Applying this *communicative design lens* means asking, *What kind of communicative experience should players have, and how does the game support it?* (Schell, 2020a, p. xxxviii). In the **Urbanity** prototypes, (1) communicative design strategies—such as turn-taking systems, feedback mechanisms, and symbolic prompts—structured how players interacted and reasoned together. (2) Socio-spatial conditions—including layout, proximity, visibility, and audibility—made visible how communication is shaped by material and cultural contexts that determined who could speak and how—whether in indoor or outdoor settings—and what messages gameplay communicated about the broader social context of participation, reinforcing or challenging existing practices and values (Flanagan, 2009; Flanagan & Nissenbaum, 2014; Salen & Zimmerman, 2004b; Schell, 2020c; Sicart, 2014) (Ashtari & de Lange, 2019; Glas et al., 2019; Gordon & Baldwin-Philippi, 2014; Gordon & Schirra, 2012; McGonigal, 2012; Schirra, 2013). Finally, (3) player attributes—such as age, motivation, and lived landscape experience—shaped what activities players enjoyed (2014, pp. 102–111; Schell, 2020b, 2020d), what perspectives surfaced, and how meaning was shared. Together, these three dimensions form a practical framework for designing games that intentionally foster inclusive, reflective, and context-sensitive communication.

The *Facilitation Guide* (Section 10.2) complements this design perspective by showing nine facilitation tasks that sustain communicative quality during play. Across **Urbanity**, facilitation ranged from minimal timekeeping in **Clash** to active moderation and reflection in **Street Parliament**, confirming that facilitation forms the dynamic interface between design and lived experience (Fullerton, 2019; Greenblat & Duke, 1981; Koster, 2014; Leigh et al., 2021; Schell, 2020a). Although in mature games facilitators may gradually step back to preserve inclusion, flow, and fairness (Duke, 1974, pp. 106–108; Kortmann & Peters, 2021), the findings show that facilitation intensity is not simply a sign of design maturity but a deliberate choice that distributes communicative agency between the game system and its human mediators. In **Urbanity**, facilitators performed recurring tasks that align with established facilitation models—structuring sessions, guiding players in real time, supporting post-game reflection, or observing from the sidelines (Alklind Taylor, 2014, p. 98). These correspond to the pre-game, in-game, and post-game phases described by Duke and Geurts (2003b, pp. 261–267) and refined by Kortmann and Peters (2021): preparation and briefing; execution through guidance, adaptation, and debate moderation; and debriefing—comprising description, analysis, and application (Steinwachs, 1992). In more complex games, facilitation can extend to teams of moderators,

domain experts, or technical assistants (Duke & Geurts, 2003b, p. 261), requiring diverse competencies supported by detailed facilitator guides (Karu-gu, 2024; Kortmann & Peters, 2021). Overall, facilitators are not background technicians but co-authors of the communicative environment—active users of the system (Alklind Taylor, 2014; Kato, 2010) whose decisions and sensitivities directly shape how small-group communication unfolds in serious participatory landscape games.

This dual foundation—design as communicative structure and facilitation as communicative mediation—operationalizes the European Landscape Convention’s participatory vision, emphasizing not the number of voices involved but the quality of dialogue through which shared landscape meanings and actions are co-constructed.

13.2 Method: Visualizing Small-Group Communication in Serious Participatory Landscape Games

This section discusses how the temporal and spatial dynamics of communication in serious participatory landscape games can be captured and analyzed. Building on Duke’s (1974, pp. xvi–xvii) conception of games as communication environments with distinct interaction patterns, the research developed the *Communication Pattern Analysis Method* (Chapter 11)—a visual-analytical framework that translates gameplay interaction into a spatio-temporal form. Where the design and facilitation frameworks (Chapter 10) examined how communicative environments are constructed, this method explores how they unfold in practice: who interacts, when, where, and how. Synthesizing insights from gameplay analysis (Duke, 1974, pp. 22, 37, 41) and small-group communication research (Bavelas, 1948; Leavitt, 1949; Shaw, 1964, 1981a), the method visualizes communication as a process evolving within the temporal and spatial boundaries of the game. Applied to the *Urbanity* prototypes, it revealed how design and facilitation together structure small-group communication and generate interaction patterns through which participants reason, negotiate, and act on landscape futures.

The method integrates three analytical layers—temporal sequencing, spatial structuring, and communication patterns—that together visualize the flow and form of small-group interaction. (1) Temporal sequencing maps how communication progresses across steps and snapshots, showing loops, breaks, and repetitions in the dialogue. (2) Spatial structuring situates players, facilitators, and artefacts within the game space, highlighting how proximity, visibility, and movement shape inclusion and voice. (3) Communication patterns, captures who speaks to whom, how ideas circulate, and how meanings shift across time and space. This multi-layered approach allows the visualization to operate not only as a record of events but as an interpretive model that links behavior, design, and facilitation into one communicative system.

Applied across the *Urbanity* prototypes, the method identified several recurrent formats beyond Duke’s (1974, p. 23) concept of *multilogue*—an open,

decentralized interaction pattern in which all participants can contribute simultaneously. *Clash* produced *opinion clashes*, brief dyadic confrontations around binary landscape statements. *Rulebook Parliament* and *Street Parliament* alternated between *defense speeches* and *open debates*, where participants justified, challenged, and redefined their positions. *Tactic Card* introduced *structured debate*, in which pro and con arguments were presented in alternating turns. These formats varied with design and facilitation intensity, illustrating how different procedural and spatial configurations led to other than *multilogue* interaction patterns and how sequences of these formats structured the communicative flow of each game.

Beyond analysis, the method acts as a diagnostic and developmental tool. The *Urbanity* visualizations made visible the invisible dynamics of gameplay—showing, for example, how redundant loops emerged in *Tactic Dice* (see Fig. 8.1) or how participation narrowed into dyadic silos in *Clash* (see Fig. 6.1). They also highlighted how facilitation sustained or limited inclusivity, contrasting the open forums of *Street Parliament* (see Fig. 7.3) with the delegate-based exchanges of *Rulebook Parliament* (see Fig. 7.1). By making these structures visible, the method offers a shared visual language for designers, facilitators, and researchers to identify communicative constraints, refine rule structures, and adapt facilitation in real time.

Ultimately, the *Communication Pattern Analysis Method* advances existing approaches to communication analysis in three ways. First, it integrates temporal sequencing, spatial structuring, and communicative patterning into a single framework, making it possible to trace how dialogue unfolds not only over time but also across the physical and symbolic space of play. Second, it reveals that beyond Duke's (1974, p. 23) idea of *multilogue*, each game generates its own sequence of communicative formats—*opinion clashes*, *defense speeches*, *open* and *structured debates*—that collectively shape the rhythm and quality of group reasoning. Third, by transforming these processes into visual form, the method acts as a diagnostic and developmental tool, allowing designers, facilitators, and researchers to recognize stagnation or exclusion and to refine rules, spaces, and facilitation strategies that sustain inclusive, reasoned dialogue.

13.3 Theory: Integrating Communication, Landscape, and Democratic Theory in the Framing of Serious Participatory Landscape Games

This section discusses the theoretical reflection on, and framing of, serious participatory landscape games as intentionally designed communication environments for the co-construction of landscape meanings and actions, examined through the lens of the European Landscape Convention's vision of democratic landscape governance (Chapter 12). The framing integrated (1) small-group communication theory in games (Bavelas, 1948; Beebe & Masterson, 2016, pp. 149–150; Duke, 1974, pp. xvi–xvii; Leavitt, 1949; Shaw, 1964, 1981a), (2) social constructivist landscape theory (Berger & Luckmann, 1966; Cosgrove, 1984;

Kühne, 2018b, 2019b, 2019c), and (3) communicative action theory (Habermas, 1984, 1987, 1990b) into a unified interpretive framework. Within these environments, small groups engage in problem-solving and decision-making through communicative patterns that enable the expression, objectivation, and internalization of diverse landscape meanings—physical, individual, and social. In doing so, participants co-construct shared understandings of the landscape and orientations for collective action under conditions that approximate rational, inclusive, and non-coercive dialogue. Yet, while this framing offers a coherent theoretical synthesis, the European Landscape Convention's epistemological openness also invites alternative readings. The following discussion revisits this framework through the complementary lenses of communication, landscape, and democratic theory—examining both its strengths and its limits as a model for the communicative construction of landscape meanings and actions.

13.3.1 Small-Group Communication Theories

From a communication-theoretical standpoint, this study framed serious participatory landscape games as designed communication environments, following Duke's (1974, pp. xvi–xvii) conception of games as systems with their own language, communication technology, and interaction patterns that distinguish them from other forms of communication. Building on this foundation, the visual analysis of *Urbanity* prototypes extended Duke's framework by identifying additional, non-multilogue interaction patterns and by developing a methodological approach capable of visualizing the temporal sequencing and spatial configuration of communication within gameplay. The thematic analysis further revealed the specific design factors and facilitation tasks that generated these patterns, offering a deeper understanding of how and why design and facilitation shape communicative dynamics in these environments.

At the same time, other general theories of group communication—functional, symbolic-convergence, and structuration theories (Hirokawa & Poole, 1996; Poole, 1999)—would have directed the analysis toward different aspects of small-group interaction. A functional approach would examine how communicative acts contribute to task completion and decision quality; a symbolic-convergence perspective would explore how shared narratives and symbolic expressions create group cohesion; while structuration theory would analyze how communicative behavior reproduces or transforms social norms within gameplay. Complementary approaches—including theories of group development, leadership, and creativity—further broaden this analytical horizon, while agenda-setting and communication modelling approaches extend the discussion into the critical and analytical domain (Ellis & Fisher, 1994; Hirokawa & Poole, 1996; Narula, 2006; Poole, 1999; Shaw, 1981a). Each of these perspectives highlights distinct mechanisms through which communication unfolds, stabilizes, or transforms within small groups—from the evolution of group roles and leadership dynamics to the generation, prioritization, and visualization of ideas.

Taken together, these perspectives suggest that serious participatory landscape games provide a rich testing ground for examining not only what communication structures and interaction patterns emerge through design and facilitation, but also *how* these patterns evolve and influence collective reasoning over time.

13.3.2 Landscape Theories

Through the lens of social-constructivist landscape theory, this study interpreted gameplay as a social process of meaning-making, examining how communication within games mediated the construction, negotiation, and stabilization of landscape understandings among participants. Drawing on Berger and Luckmann's (1966) model of externalization, objectivation, and internalization, and Kühne's (2015b, p. 29) five-step model of meaning construction and his concept of landscape socialization (Kühne, 2019b, pp. 61–64), the analysis refined social-constructivist landscape theory by contextualizing it within the communicative dynamics of serious participatory landscape games. It showed that landscape meanings emerge through identifiable communicative phases—individual expression, shared negotiation, and partial internalization—whose realization depends on game design and facilitation. By tracing how structural rules and facilitative actions mediated the visibility and interaction of differentiated knowledge, the study demonstrated how serious participatory landscape games can operationalize and extend the theory's account of meaning-making as a socially organized process.

While this theoretical framing of landscape meaning-making builds on the **Urbanity**, it is important to note that these represent a non-role-play type of serious participatory landscape games. In such settings, players speak in their own voices, allowing direct comparison of lived experiences and meanings. This empirical context, however, also raises the question of how the process of landscape meaning construction may differ in role-play settings—where participants adopt fictional or stakeholder roles and construct meanings through performed identities rather than personal expression (Abt, 1987; Barreteau et al., 2001; Barreteau et al., 2003; Becu et al., 2001; Daré & Barreteau, 2003; Duke, 1966; Duke & Geurts, 2003b; Fine, 1983; Lankford et al., 2004; Medema et al., 2016; Montola, 2012; Sanoff, 1979; Tan, 2014, 2017). Role-play can foster empathy and creative exploration even in contexts of conflict (Deterding, 2016; Gordon et al., 2017; Gordon & Schirra, 2012; Innes & Booher, 1999b; Tan, 2014), yet it is effective only when roles are intentionally designed and sensitively facilitated; otherwise, it risks reducing complexity to stereotype, and expression becomes superficial (Deterding, 2016; Fine, 1983; Gordon & Schirra, 2012; Montola, 2012; Tan, 2014).

While this study adopted a social-constructivist interpretation of landscape, alternative theories would frame the relationship between games, communication, and landscape differently. Even within constructivism, alternative approaches such as autopoietic systems theory (Luhmann, 1995) and discourse

theory (Foucault, 1995; Habermas, 1984, 1987, 1989; Laclau & Mouffe, 1985; Mouffe, 1999) would shift the analytical focus: the former examining how institutional systems—planning, education, science—generate and stabilize distinct landscape meanings through their own communicative logics; the latter exploring how power relations and rhetorical strategies shape discourse and decision-making in gameplay. Beyond constructivism, the epistemological pluralism of the European Landscape Convention (Kühne, 2019b, p. 116)—defining landscape as “an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors” (Council of Europe, 2000a, Article 1(a))—allows other theoretical lenses as well. A positivist view might highlight causal relations between environmental and social variables represented in games; an essentialist reading could address symbolic and identity-related meanings; and a neo-pragmatist approach would emphasize how practical reasoning and negotiated action emerge in collective play.

This theoretical openness suggests that serious participatory landscape games can reveal multiple dimensions of the landscape–communication relationship, depending on which epistemological lens is applied.

13.3.3 Democracy Theories

The selected Habermasian (1984, 1987, 1990b) democratic theory introduces the normative dimension of how dialogue ought to proceed. The theory of communicative action provides a lens for evaluating whether gameplay fosters equitable participation, reason-giving, and coherent agreement—the three analytical dimensions that structured this study’s cross-case reflection. The analysis of the **Urbanity** prototypes showed that (1) equitable participation depended on the continuous interaction of procedural, spatial, social, and facilitative layers that either redistributed or reinforced communicative power; (2) reason-giving procedure was not present throughout the entire games or across all interactions, yet certain patterns—such as *open* and *structured debates* (**Street Parliament**, **Tactic Card**)—enabled justification and critique, while others encouraged performative or tactical exchanges; and (3) coherence and depth of agreement revealed consensus not as a fixed outcome but as a spectrum, ranging from emotional or procedural alignment to genuine understanding and value-based convergence shaped by design and facilitation strategies. Together, these findings demonstrate that serious participatory landscape games can approximate deliberative ideals only when design and facilitation consciously align to sustain equality, reasoning, and reflective closure.

This suggests that the communicative-action framing fits best with deliberative types of serious participatory landscape games—such as **Redesire** (Ashtari & de Lange, 2019), **@stake** (Gordon et al., 2016) or **Community Conversational** (Johnson et al., 2017)—which rely on structured prompts, voting, and facilitation to sustain pluralistic debate. Collaborative consensus-building formats like **Passive Energy Strategy Selection** (Sanoff, 1979, p. 94)—that alternate between individual and group discussion under consensus rules—likewise use tangible

tools and iterative discussion to achieve convergence. In contrast, games explicitly modeling negotiation or conflict (Barreteau et al., 2001; Barreteau et al., 2003; Daré & Barreteau, 2003; Tan, 2014, 2017) such as in *Corridor* (Abt, 1987, pp. 91–94), might require different theoretical grounding—rooted in negotiation theory, where communication centers on bargaining among fixed interests (Fischer & Forester, 1993; Fisher et al., 1981; Forester, 1987, 1999, 2006; Healey, 1993; Ihnen Jory, 2016; Innes, 1995, 1996, 2004).

Expanding beyond deliberative frameworks, other democratic theories illuminate further dimensions of in-game communication, and the European Landscape Convention itself embraces interactive, participatory, deliberative, and direct democratic traditions (Council of Europe, 2018a, pp. 66–70). Agonistic democracy (Mouffe, 1999) would interpret gameplay as a productive confrontation of competing values rather than a movement toward consensus. Participatory and radical democratic perspectives (Laclau & Mouffe, 1985; Mouffe, 1992; Pateman, 1970) would emphasize empowerment and the redistribution of voice, asking whose experiences become heard and legitimized through design and facilitation. Other deliberative approaches—such as discursive pluralism (Dryzek, 2000), moral reciprocity (Gutmann & Thompson, 1996), and related analytical strands (Bohman & Rehg, 1997; Elster, 1998; Held, 2006)—would highlight the emotional, moral, and empathetic dimensions of dialogue, viewing games as spaces where learning and recognition emerge through disagreement as much as consensus.

Recognizing this diversity situates serious participatory landscape games as plural experiments in democratic communication—spaces where reason, emotion, and power coexist within the communicative construction of landscape meanings and actions.

13.3.4 Summary

Taken together, this framing games as environments for the communicative construction of landscape meanings and actions provides a coherent understanding of serious participatory landscape games as communicative systems connecting the structural, interpretive, and normative dimensions of participation. Small-group communication theory of games grounds the analysis of interaction design and facilitation; social constructivist landscape theory explains how meanings and knowledge are socially constructed and mediated; and communicative action theory situates these processes within ideals of inclusion and reasoning. This triangulation reflects the layered nature of the games themselves—procedurally structured, meaning-producing, and action-oriented—bridging practical design with the epistemological and political contexts of landscape governance. While alternative framings may yield different interpretations, the model developed here demonstrates how communicative structure, meaning-making, and collective reasoning can operate together within a single participatory framework—advancing the European Landscape Convention’s vision of democratic landscape governance.

14

Conclusions

This chapter concludes the thesis by synthesizing its main findings on how serious participatory landscape games can be deliberately designed and facilitated as communicative environments for the co-construction of landscape meanings and actions. It reflects on the broader implications of this framing for participatory landscape governance and revisits the study's three interrelated dimensions—practice, method, and theory—through which these findings were developed.

Section 14.1 revisits the broader context of the research and the guiding questions it set out to address. Section 14.2 summarizes the answers to these questions, organized around the three aims of the study. Section 14.3 highlights the main empirical, methodological, and theoretical contributions and their implications for practice, research, and policy. Section 0 outlines directions for future inquiry, while Section 14.5 closes with a reflective synthesis on the role of serious participatory landscape games in advancing the European Landscape Convention's democratic vision.

Taken together, these sections show how serious participatory landscape games operationalize this vision by structuring communicative processes, rendering them observable, and linking them to the democratic co-creation of landscape futures (Council of Europe, 2000a).

14.1 Revisiting the Context

The European Landscape Convention (Council of Europe, 2000a, Articles 5(c), 6(C–D); 2018a, 2018b; Luginbühl, 2017) calls for public participation in the protection, management, and planning of landscapes, recognizing them as socially constructed spaces shaped by people's perceptions, values, and everyday practices (Council of Europe, 2000a, Article 1(a)). Yet in practice, these ambitions often remain constrained by expert-driven governance and consultation formats that struggle to foster genuine dialogue or reconcile diverse perspectives (Egoz et al., 2018a; Jones, 2011; Jones & Stenseke, 2011a, 2011b).

The search for more interactive and dialogic approaches has led to the exploration of serious participatory landscape games—structured, rule-based formats that turn participatory processes into gameplay, enabling players to deliberate, solve, and decide on landscape issues (Szilágyi-Nagy, 2022, p. 400). While their potential has been recognized across different scales and contexts of landscape protection, planning, and management (Brković Dodig & Groat, 2021b; Duke & Geurts, 2003b; Szilágyi-Nagy, 2022; Tan, 2014), empirical, methodological, and theoretical understanding of how such games structure and facilitate communication remains limited.

To address this gap, the thesis investigated how face-to-face, co-located small-group communication in analogue or computer-assisted serious participatory landscape games can support the Convention's vision of public participation in landscape matters. These games combine physical and digital components but always bring participants together in the same space, allowing embodied, spatial, and interpersonal dynamics to emerge.

Using a longitudinal instrumental case study of the Hungarian street-debate game *Urbanity* (Építészfórum, 2016, February 8, 2021, May 3; kultúrAktív Egyesület, 2015, August 28; Szilágyi-Nagy & Tóth, 2017; Tóth & Szilágyi-Nagy, 2021), the research examined three core questions:

1. How do game design and facilitation shape small-group communication in serious participatory landscape games?
2. How can small-group communication processes in serious participatory landscape games be visualized and analyzed?
3. How can communication in serious participatory landscape games be theoretically framed—through social constructivist and communicative-action theories—as communicative environments that advance the democratic landscape-governance vision of the European Landscape Convention?

These inquiries were grounded in Duke's empirical theory of games as communicative environments (Duke, 1974; Duke & Geurts, 2003b), social constructivist landscape theory (Kühne, 2015b, 2019b, 2019c), and communicative action theory (Habermas, 1984, 1987, 1990b). Together, they sought to understand how participatory landscape games can mediate between individual perception and collective decision-making, thereby contributing to the European Landscape Convention's democratic vision of landscape governance.

14.2 Answers to the Research Questions

The inquiry unfolded through three interconnected aims, each addressing one dimension of the study: practice, methodology, and theory. Together, these aims explored how the design and facilitation of participatory games shape small-group communication; how such processes can be observed and analyzed; and how games can be understood theoretically as communicative environments for the communicative co-construction of landscape meanings and actions in democratic landscape governance.

14.2.1 Practice-Oriented Findings

The first aim examined how game design and facilitation influence the structure and quality of small-group communication. Analysis of the four *Urbanity* prototypes demonstrated that interaction in serious participatory landscape games does not emerge spontaneously but is shaped by deliberate design and facilitation choices. Design elements such as rules, roles, and materials structure the

flow and focus of interaction, while facilitation sustains the communicative balance needed to achieve the intended goals of participation and problem-solving.

The resulting *Game Design Catalogue* identified thirty-two design factors, grouped into three categories—communicative design strategies, socio-spatial conditions, and player attributes—while the complementary *Facilitation Guide* distilled nine core facilitation tasks supporting balanced and reflective dialogue. Together, these outputs revealed that meaningful communication depends on the dynamic interplay between structural design and facilitation practice. Designing and facilitating serious participatory landscape games with small-group communication in mind therefore requires conscious awareness of these factors and their alignment to support inclusive, reasoned, and goal-oriented interaction.

14.2.2 Methodological Findings

The second aim developed the *Communication Pattern Analysis Method*, a spatio-temporal visual language for observing and improving communication during gameplay. Building on Duke's (1974) empirical framework and earlier visual models by Bavelas (1948), Leavitt (1949), and Shaw (1964, 1981a), the method integrates spatial and temporal dimensions into a unified analytical system. It captures how communication unfolds across time and space—who interacts with whom, when, and where—revealing inclusion, exclusion, and shifts in participation.

Beyond serving as a descriptive tool, the method operates as a reflective feedback mechanism for designers and facilitators. It enables the visualization of communication flow and identifies moments where dialogue expands or contracts, helping to evaluate the inclusiveness and coherence of interaction. By translating communicative processes into visible patterns, the method bridges observation and design—providing a foundation for iterative improvement and for advancing serious participatory landscape games as communicative instruments.

14.2.3 Theoretical Findings

The third aim synthesized Duke's theory of games as communicative environments (Duke, 1974; Duke & Geurts, 2003b), social-constructivist landscape theory (Berger & Luckmann, 1966; Kühne, 2015b, 2019b, 2019c), and communicative action theory (Habermas, 1984, 1987, 1990b) to frame serious participatory landscape games as settings for the communicative co-construction of landscape meanings and actions. Within the bounded magic circle (Salen & Zimmerman, 2004), serious participatory landscape games can become environments where players externalize, negotiate, and align diverse landscape interpretations through reasoned and inclusive dialogue.

When designed and facilitated with communicative intent, these games uphold Habermasian norms of equality, justification, and mutual understanding—fostering

communicative action as a democratic process of shared reasoning and decision-making about landscapes. In doing so, they operationalize the participatory ideals of the European Landscape Convention, bridging individual perception and collective governance through structured communication and reflective play.

14.3 Significance and Contributions

This research advances understanding of how serious participatory landscape games can function as communicative environments where small groups engage in problem-solving and decision-making about landscape protection, management, and planning, thereby actively participating in landscape governance as envisioned by the European Landscape Convention. It offers original contributions across three interrelated dimensions—*practice, method, and theory*—each addressing one of the study’s guiding aims.

Together, they clarify how the intentional design and facilitation of games can structure and sustain small-group interaction around complex landscape issues, how these communicative processes can be visually analyzed and iteratively improved, and how such games can be theoretically grounded as communicative environments for the co-construction of landscape meanings and actions.

14.3.1 Practical Contribution

This research demonstrates that serious participatory landscape games can be intentionally designed and facilitated around communication itself, offering designers and facilitators concrete strategies for structuring dialogue, balancing participation, and sustaining collective reasoning.

Through the longitudinal development and analysis of the **Urbanity** prototypes, the study identified specific design and facilitation factors—rules, materials, spatial arrangements, and facilitation strategies—and organized them into two practical reference tools: the *Game Design Catalogue* and the *Facilitation Guide*.

These resources reveal that meaningful, inclusive dialogue does not emerge spontaneously but depends on the alignment between structural design and facilitative practice. By translating empirical findings into actionable guidance, the research repositions serious participatory landscape games from being engagement tools to becoming designed systems of communication. This contribution supports practitioners, educators, and facilitators in creating structured yet flexible participatory settings where diverse voices can engage in shared reasoning about landscape issues.

14.3.2 Methodological Contribution

The study introduces the *Communication Pattern Analysis Method*—an innovative spatio-temporal visualization framework that captures not only the sequence of communication but also its spatial configuration within gameplay, a combination rarely achieved in existing models.

Extending earlier approaches (Bavelas, 1948; Duke, 1974; Leavitt, 1949; Shaw, 1964, 1981a), the method makes interaction both visible and analyzable, showing who speaks, when, and where. Beyond description, it functions as a diagnostic and reflective tool for iterative design and facilitation—revealing inactive participants, redundant or dominating interaction loops, and moments when communication falters.

By linking observation to adjustment, it contributes a transferable method for researchers and practitioners in participatory design and landscape governance to observe, evaluate, and refine the communicative quality of collaborative processes.

14.3.3 Theoretical Contribution

The theoretical synthesis of Duke's theory of games as communicative environments (Duke, 1974; Duke & Geurts, 2003b), social constructivist landscape theory (Berger & Luckmann, 1966; Kühne, 2015b, 2019b, 2019c), and communicative action theory (Habermas, 1984, 1987, 1990b) provides a conceptual explanation of why these games work.

It shows that serious participatory landscape games succeed because they support the communicative co-construction of landscape meanings and actions—creating settings in which participants can express and negotiate meanings under conditions that foster equality, justification, and mutual understanding, sometimes approaching the ideals of rational discourse.

While the European Landscape Convention allows for multiple theoretical alignments within both landscape research and democratic theory (Bruns et al., 2022, p. 52, Chapter 3.5; Council of Europe, 2018a, pp. 66–70; Kühne, 2019b, p. 116), this framing grounds participatory landscape games in a deliberative model of democracy and a constructivist understanding of landscape, linking individual perception with collective reasoning. It strengthens the theoretical foundation for using games as instruments of the Convention's participatory vision of democratic landscape governance.

14.3.4 Integrative Significance

Together, these contributions establish a coherent framework linking design practice, methodological observation, and theoretical interpretation. They demonstrate how serious participatory landscape games can be deliberately shaped, empirically analyzed, and conceptually understood as communication environments that enable the communicative co-construction of landscape meanings and actions—transforming participation from consultation into collaboration.

14.4 Future Research Directions

Building on the empirical, methodological, and theoretical insights of this study, several directions emerge for advancing research on serious participatory

landscape games. These directions deepen the thematic and visual analyses developed here and extend the theoretical dialogue on communication, landscape, and democracy.

1. **Deepening empirical and theoretical analysis of communication content:** Future studies could investigate the content of communication during gameplay—analyzing audio and video recordings to reveal how meaning-making and rational argumentation occur. Such work could examine how participants formulate and respond to validity claims (Habermas, 1984, pp. 99–100) and how meaning-making processes unfold in line with social constructivist interpretations of landscape (Kühne, 2015b, p. 29).
2. **Comparing deliberative and negotiation-based game formats:** Future research could compare deliberative, consensus-seeking and negotiation-oriented serious participatory landscape games to explore how different communicative logics shape participation and decision-making. Such studies could clarify how design and facilitation strategies foster consensus-oriented reasoning versus strategic negotiation, as well as employ the visualization method, refining the theoretical boundaries between deliberation and bargaining in participatory gameplay.
3. **Investigating role-play as a communicative mechanism:** Role-play remains a central but underexplored element of serious participatory landscape games. Future research could analyze how taking on roles influences authenticity, empathy, and argumentation—whether players justify positions as themselves or as fictional characters—and how this affects inclusivity, understanding, and the overall quality of dialogue.
4. **Extending and integrating visual analysis methods:** The *Communication Pattern Analysis Method* provides a framework for visualizing how communication unfolds across time and space. Future work could apply and refine this method across various types of serious participatory landscape games and diverse cultural and institutional settings, testing its adaptability and combining it with thematic or discourse analysis to link interaction patterns with communicative content.
5. **Exploring alternative theoretical lenses:** Further research could reinterpret serious participatory landscape games through alternative theoretical frameworks—from symbolic-convergence or structuration theories of communication, to phenomenological or pragmatic landscape theories, or agonistic and participatory models of democracy. Such perspectives could highlight new communicative dynamics, including conflict, creativity, or institutional learning, broadening the theoretical landscape of serious participatory landscape game research.
6. Together, these directions extend the study's analytical and theoretical foundations, advancing serious participatory landscape games as experimental settings for studying and enhancing communication, collaboration, and democratic practice in line with the European Landscape Convention.

14.5 Concluding Reflection

This thesis has addressed a persistent challenge in democratic landscape governance: although the European Landscape Convention calls for public participation in decisions on landscape protection, management, and planning (Council of Europe, 2000a, Articles 5(c), 6(C–D); 2018a, 2018b; Luginbühl, 2017), participation in practice often remains procedural, fragmented, and limited in communicative depth. The research responded to this gap by examining how serious participatory landscape games can function as communicative environments where small groups engage face to face in problem-solving and decision-making about landscape issues.

The inquiry demonstrated that these games are not simply participatory tools but deliberately designed and facilitated communication systems that make the processes of meaning-making and reasoning both observable and influenceable. Viewed through social constructivist landscape theory, the research revealed how game design and facilitation can support—or sometimes constrain—the construction of landscape meanings through processes of expression, objectivation, and internalization, while mediating diverse knowledge stocks of landscape—personal, local, expert, and experiential. Through communicative action theory, it showed how equality, reason-giving, and the depth of agreement can be intentionally fostered by design and facilitation, enabling dialogue to lead toward shared orientations and, in some cases, collective decisions about the landscape’s future. Together, these perspectives explain how serious participatory landscape games transform participation into structured, reflective communication capable of bridging diverse perspectives on how landscapes are understood and governed.

The **Urbanity** street-debate game (Szilágyi-Nagy & Tóth, 2017; Tóth & Szilágyi-Nagy, 2021) provided the empirical foundation for this investigation, serving as an experimental ground for exploring how small-group communication in serious participatory landscape games can be (1) designed and facilitated (practical aim), (2) visualized and analyzed (methodological aim), and (3) theoretically framed (theoretical aim). Through the iterative development of four prototypes, the study identified design and facilitation factors that shape communicative equality and reasoning (summarized in the *Game Design Catalogue* and *Facilitation Guide*), developed a visual method for mapping interaction across time and space (*Communication Pattern Analysis Method*), and situated these insights within the frameworks of Duke’s (1974) theory of games as communicative environments, social constructivist landscape theory, and communicative action theory—interpreting these games as intentionally designed and facilitated environments for the communicative co-construction of landscape meanings and actions.

Taken together, this dissertation shows that serious games, when applied in participatory landscape protection, planning, and management processes, can function as communicative environments of democratic landscape governance in the sense of the European Landscape Convention. Rather than merely

framing the landscape issues at stake, the deliberate design and facilitation of these games structure and guide small-group communication—including its interaction patterns—in ways that support decision-making and problem-solving processes. In doing so, the games create the environment in which small groups can communicatively co-construct landscape meanings and related actions, functioning as a “a collective democratic exercise whereby differences are accepted, common characteristics found, and operational compromises eventually reached” (Council of Europe, 2008, II.2.3.A).

15 Literature

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FOLDOUT ANALYTICAL DIAGRAMS

VISUAL ANALYSIS OF SMALL-GROUP COMMUNICATION PROCESSES IN THE URBANITY GAME PROTOTYPES

(REFER TO THESE DIAGRAMS WHILE READING CHAPTERS 6–9)

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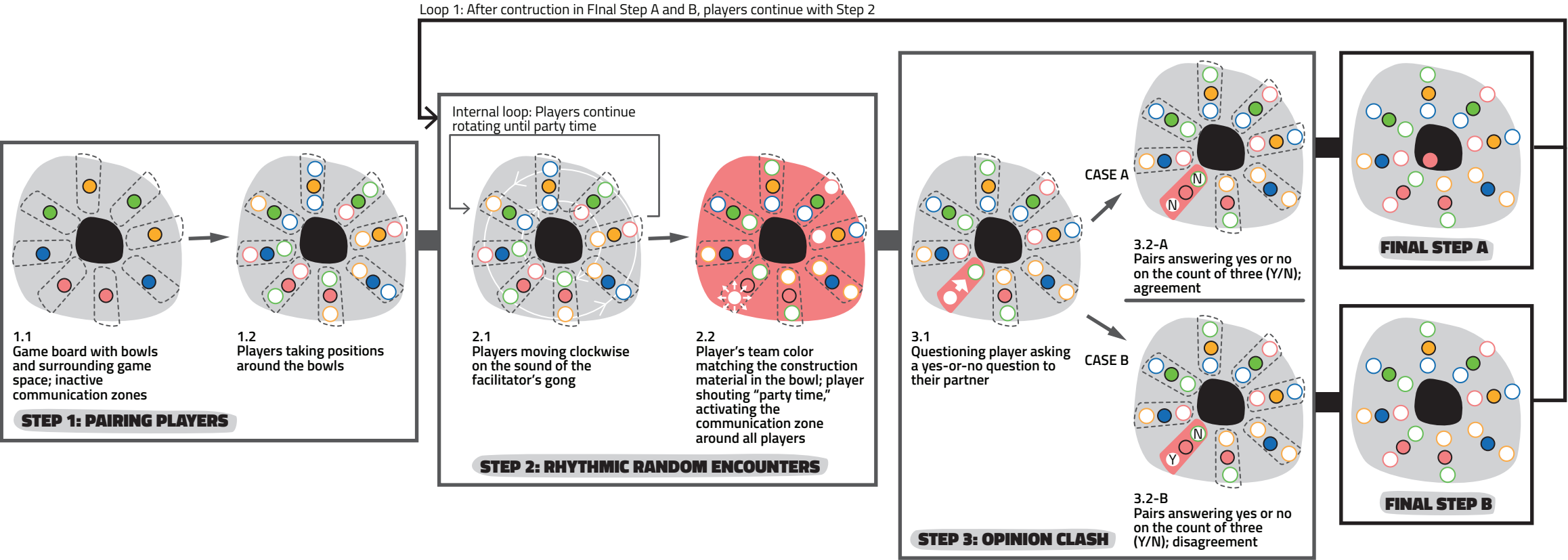
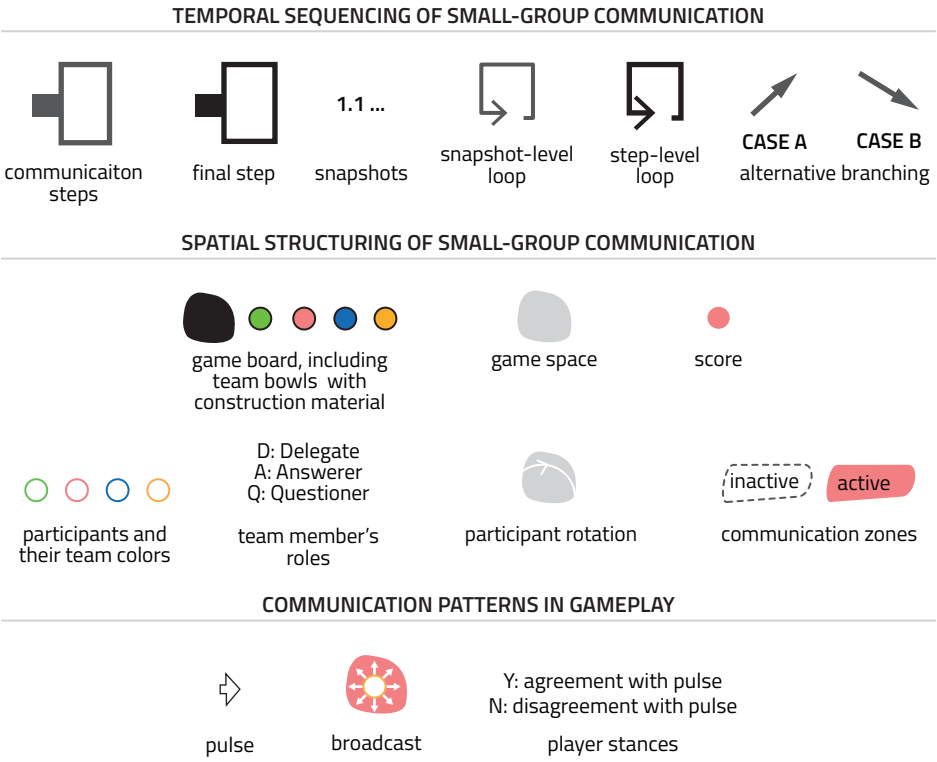
Fig. 9.1 Tactic Card: Visual analysis of the small-group communication process

CHAPTER 6

Fig. 6.1 Clash: Visual analysis of the small-group communication process

FIG. 6.1 CLASH
VISUAL ANALYSIS OF THE SMALL-GROUP COMMUNICATION PROCESS

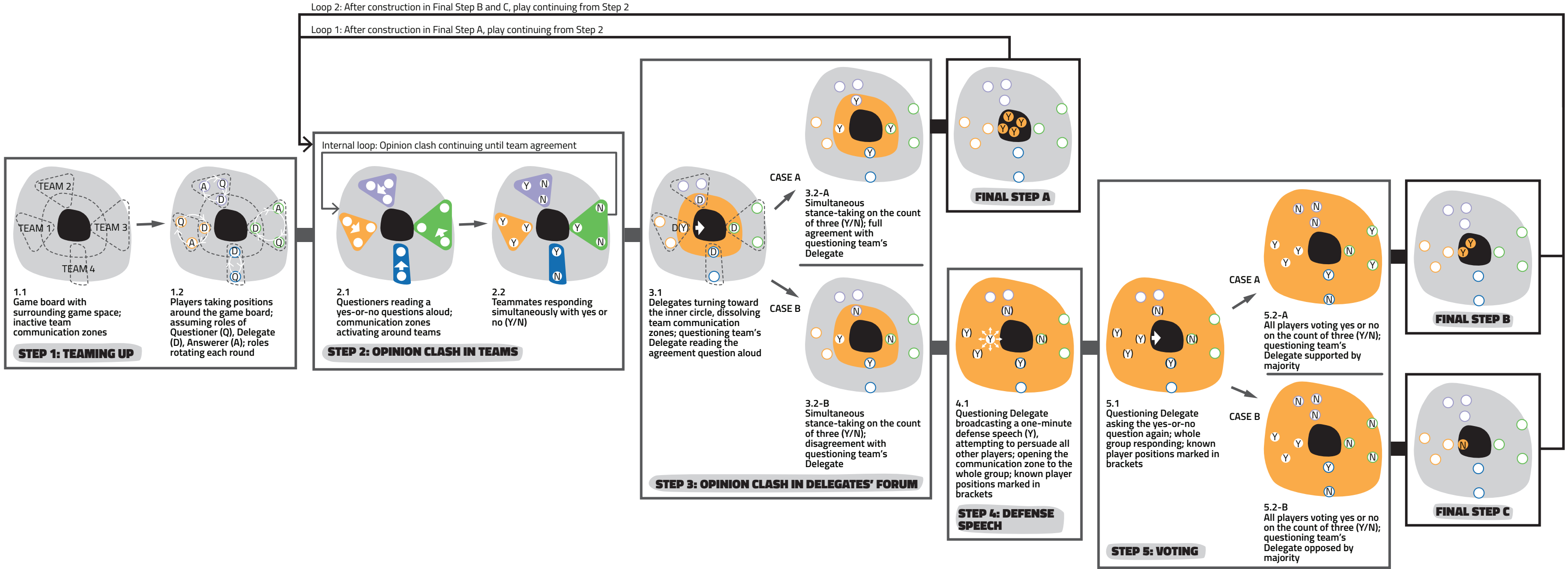
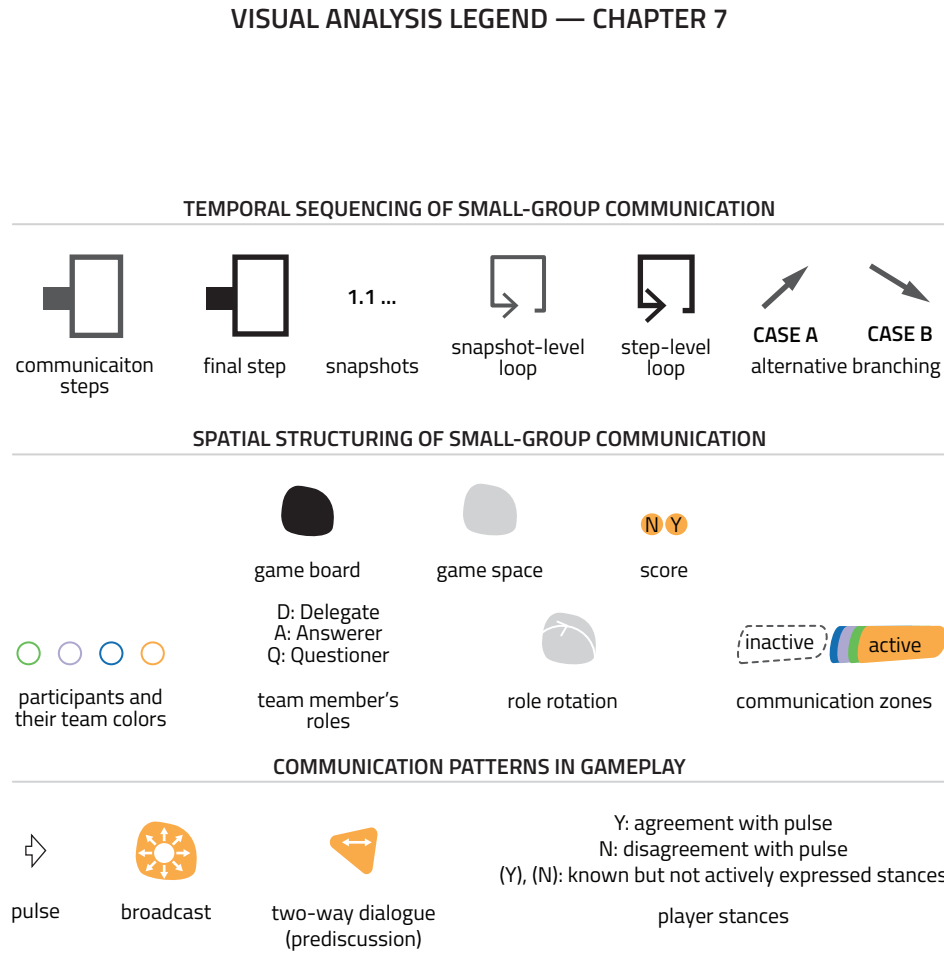
VISUAL ANALYSIS LEGEND — CHAPTER 6



CHAPTER 7

Fig. 7.1 Rulebook Parliament: Visual analysis of the small-group communication process

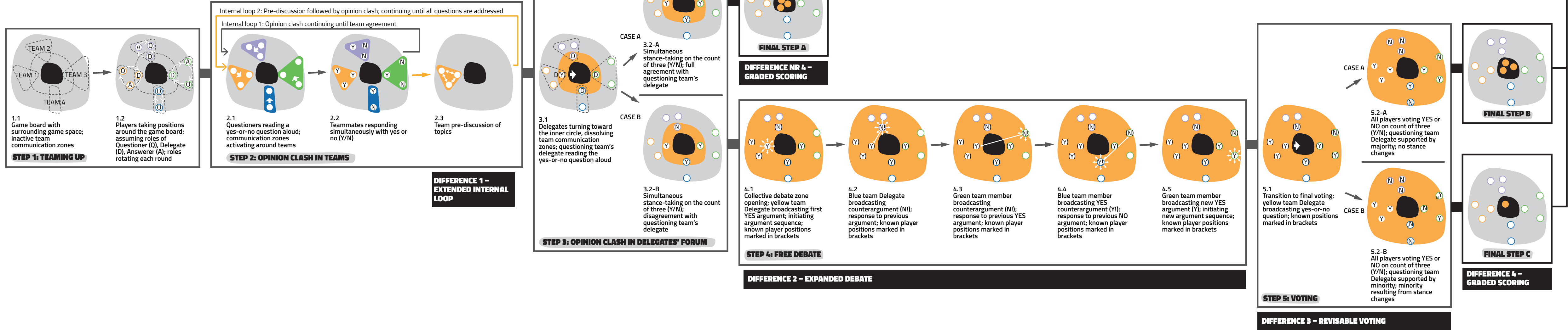
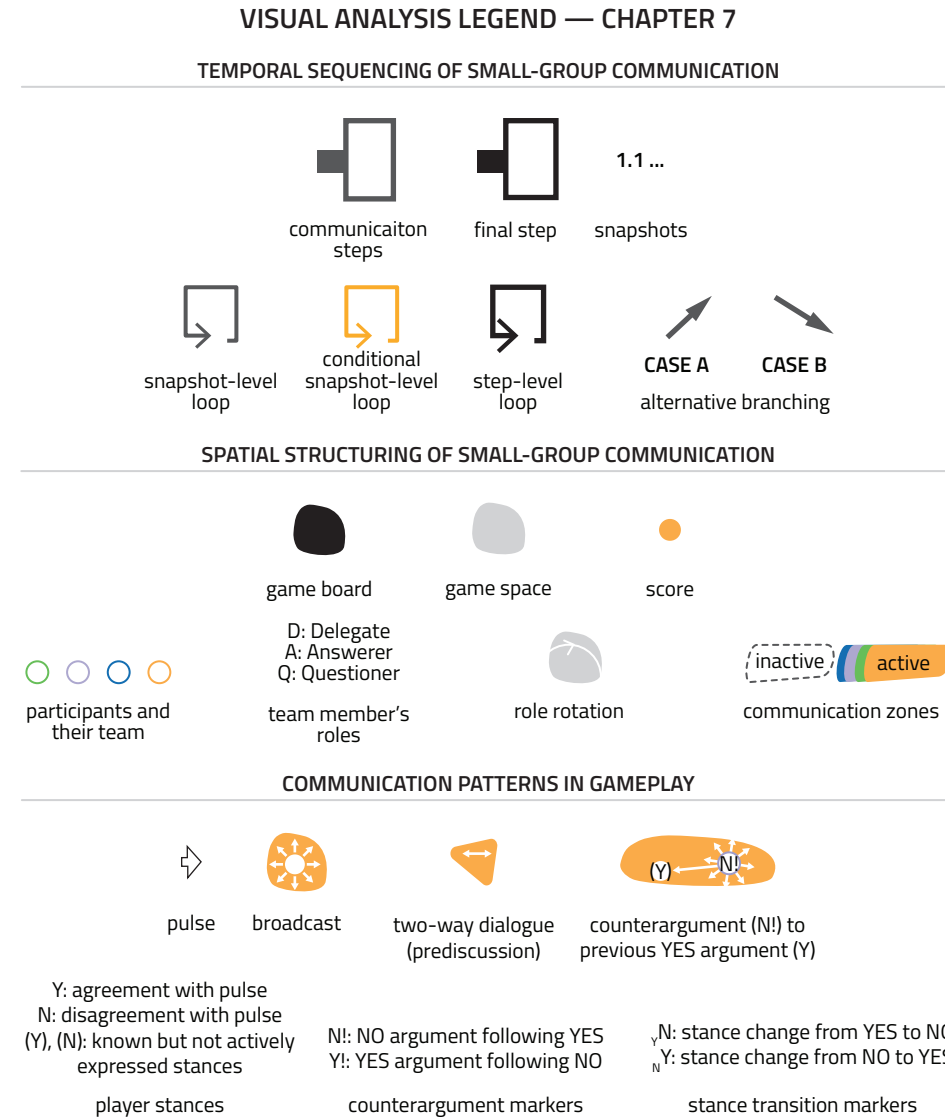
FIG. 7.1 RULEBOOK PARLIAMENT
VISUAL ANALYSIS OF THE SMALL-GROUP COMMUNICATION PROCESS



CHAPTER 7

Fig. 7.2 Indoor Parliament: Visual analysis of the small-group communication process

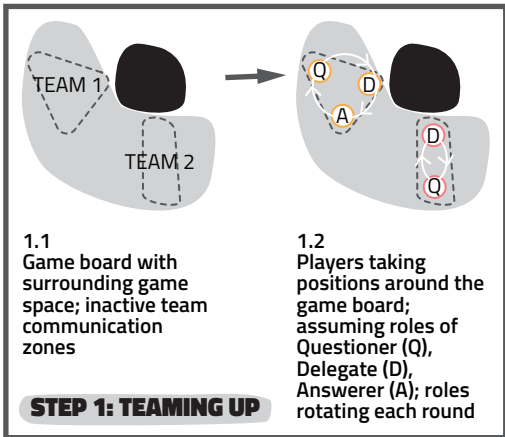
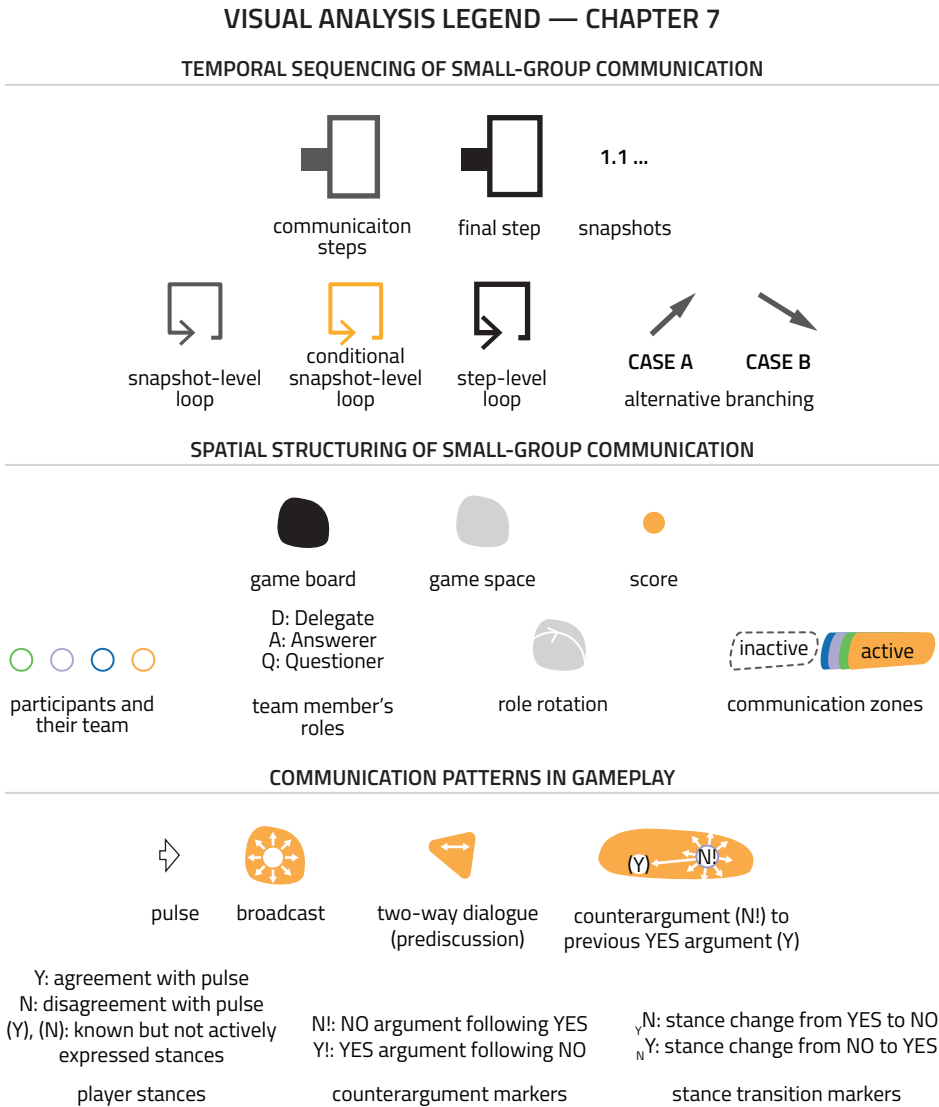
FIG. 7.2 INDOOR PARLIAMENT
VISUAL ANALYSIS OF THE SMALL-GROUP COMMUNICATION PROCESS



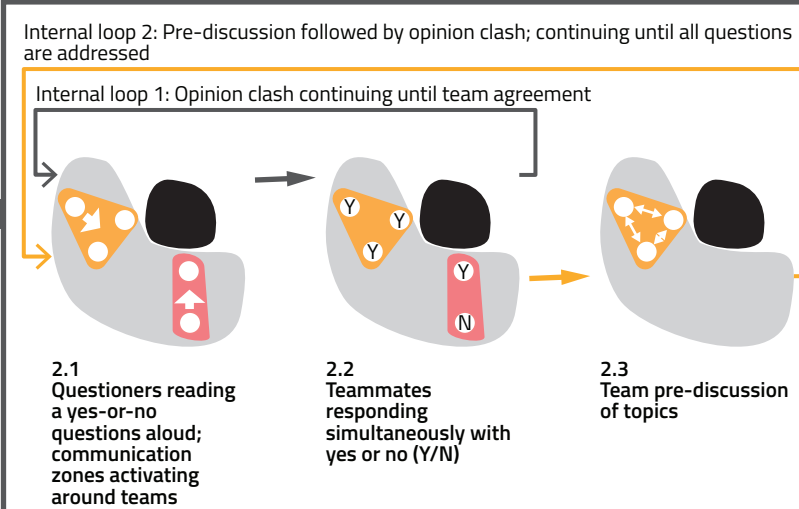
CHAPTER 7

Fig. 7.3 Street Parliament: Visual analysis of the small-group communication process

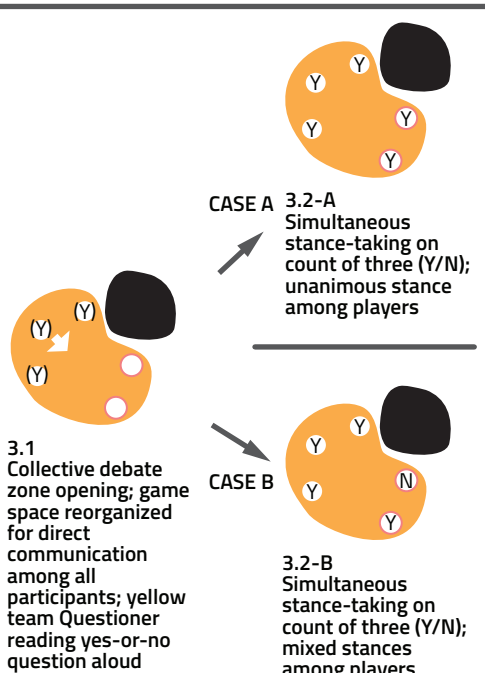
FIG. 7.3 STREET PARLIAMENT
VISUAL ANALYSIS OF THE SMALL-GROUP COMMUNICATION PROCESS



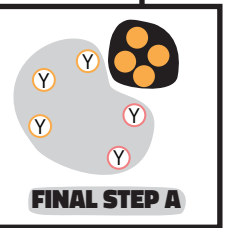
DIFFERENCE 1 – FLEXIBLE TEAMING



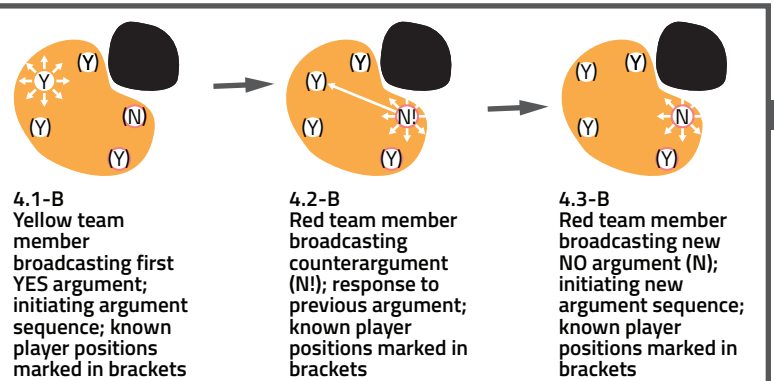
DIFFERENCE 2 – PRESELECTION OF QUESTIONS



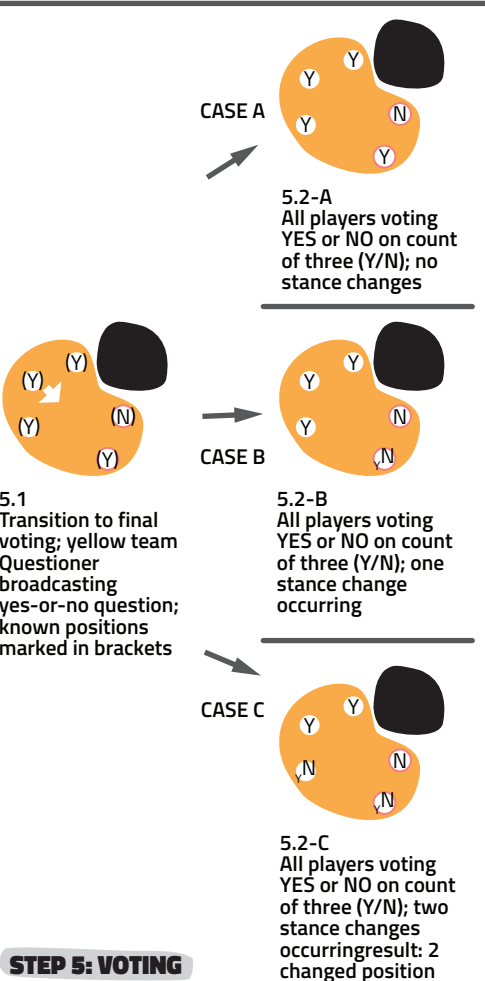
DIFFERENCE 3 – REMOVAL OF THE DELEGATES FORUM



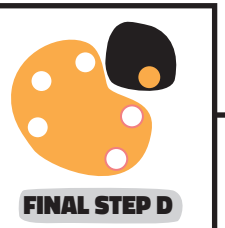
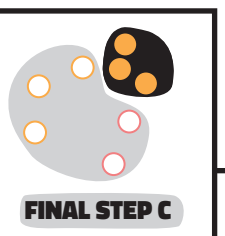
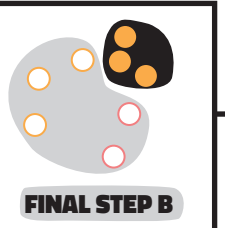
DIFFERENCE 6 – GRADED SCORING



DIFFERENCE 4 – OPEN, SPONTANEOUS DEBATE



DIFFERENCE 5 – REFLECTIVE VOTING

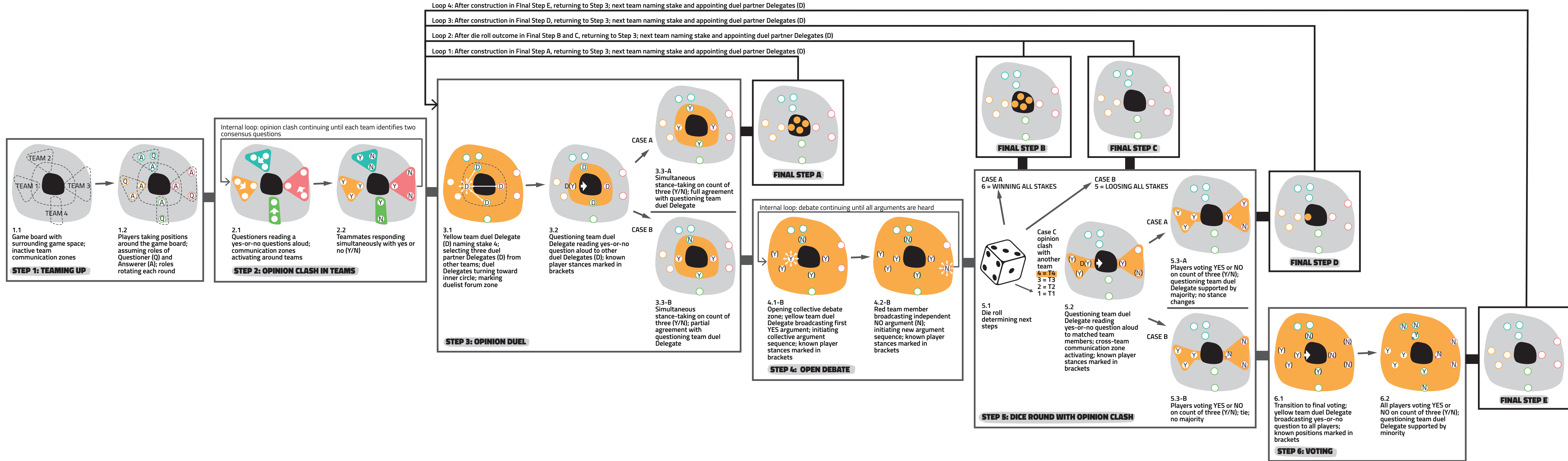
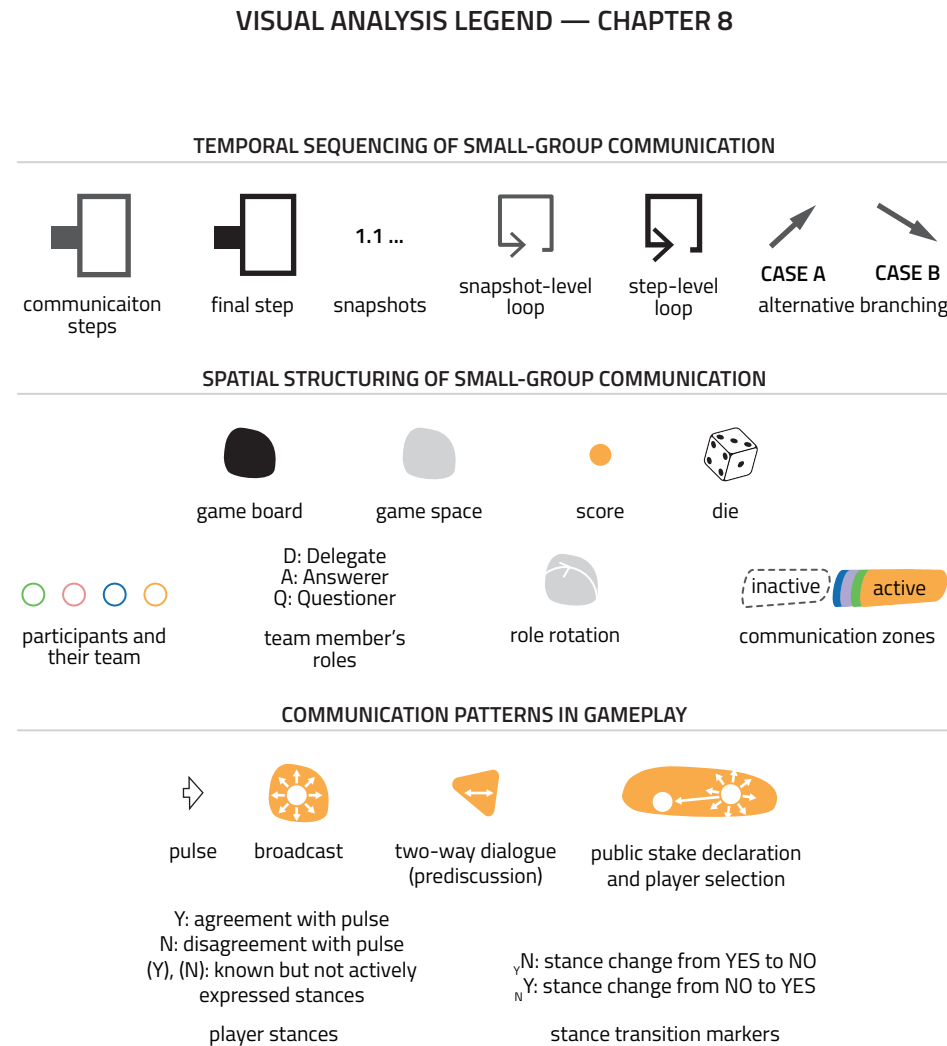


DIFFERENCE 6 – GRADED SCORING

CHAPTER 8

Fig. 8.1 Tactic Dice: Visual analysis of the small-group communication process

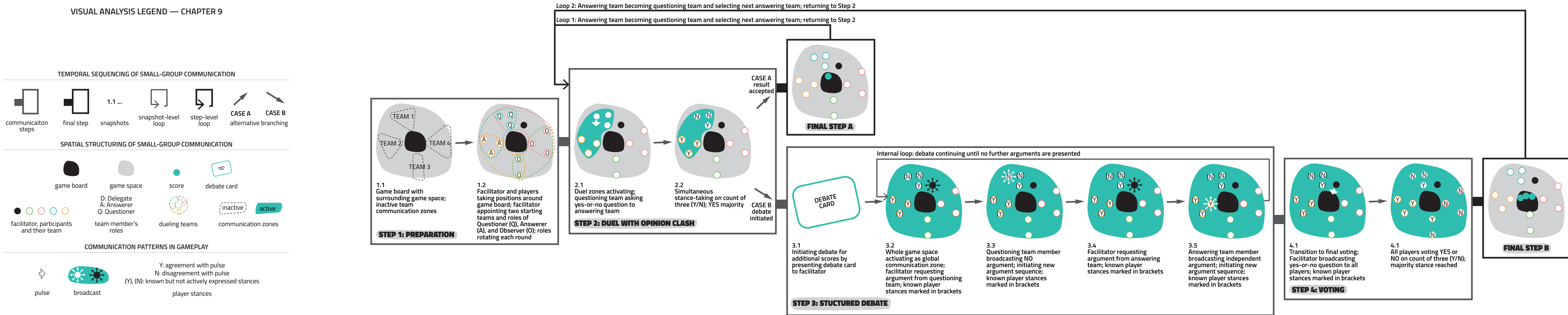
FIG. 8.1 TACTIC DICE
VISUAL ANALYSIS OF THE SMALL-GROUP COMMUNICATION PROCESS



CHAPTER 9

Fig. 9.1 Tactic Card: Visual analysis of the small-group communication process

FIG. 9.1 TACTIC CARD
VISUAL ANALYSIS OF THE SMALL-GROUP COMMUNICATION PROCESS



Constructing Landscapes Communicatively

This dissertation examines how serious participatory landscape games—designed to support dialogue among citizens, stakeholders, and experts—can contribute to democratic landscape governance as envisioned by the European Landscape Convention. Focusing on small-group communication within analogue, face-to-face games, it investigates how game design and facilitation shape equitable, reasoned, and reflective dialogue, and how diverse landscape experiences and values can be translated into shared meanings and collective action. Through a collective instrumental case study of the Hungarian street-debate game *Urbanity* and its four prototypes, the study develops practical design and facilitation guidance, introduces a spatio-temporal method for analyzing in-game communication patterns, and proposes an integrative theoretical framework grounded in social constructivist landscape theory and communicative action theory. The findings demonstrate that when serious participatory landscape games are designed and facilitated with small-group communication in focus, they can function as communicative environments where landscape meanings and future-oriented actions are co-constructed through dialogue oriented toward mutual understanding.

About the author

M. Eng. Anna Szilágyi-Nagy is a landscape architect, researcher, and youth engagement expert working on playful and game-based participation in landscape and public space design. She practices, researches, and teaches participatory approaches, developing experimental methods that enable children, young people, and adults to actively contribute to shaping their environments. As president of the Hungarian association kultúrAktív for architectural education and participation, she co-developed the award-winning street-debate game *Urbanity*, whose practical application led to her research interest in how games can support democratic landscape participation. She is also the founder of MitSpielRaum, an independent practice dedicated to playful participatory design and facilitation.