A relational approach to understanding interactions in interactive art

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Chapter 7

Evaluation and Reflection on the Relational Modelling Tool

7.1 Introduction

In Chapter 2 and Chapter 3, we introduce the relational model and the Relational Modelling Tool (RMT), respectively, as a tool for describing and visualising interactions within the domain of interactive art [1]. Furthermore, we demonstrate the capability of RMT to model a diverse range of co-located interactions in Chapter 4, more-than-human interaction involving both human and nonhuman participants in Chapter 5, and participatory artworks beyond interactive art in Chapter 6. These analyses not only showcase the modelling capacities of RMT but also uncover valuable insights into the diverse forms of interaction and participatory processes by comparing the descriptions across selected artworks.

While RMT has proven effective as an analytical tool, we argue that it also holds significant potential for facilitating the creation of new interactive dialogues. Building on the formal input structures of RMT and leveraging a dataset of existing interactive artworks, we developed a generative component for RMT. This component introduces features that enable users to generate novel interactive elements, reconfigure their combinations, and expand on existing dialogue structures. Such functionalities are designed to inspire and stimulate creative exploration, offering avenues for imagining and exploring new interactive dialogues.

Thus far, RMT has primarily been used and tested internally, limiting the breadth and diversity of feedback on its usability and functionality. In order to evaluate it with a broader

[1] The latest version of RMT is accessible via: https://modeltool.liacs.nl/

user group, we organised a workshop, inviting researchers and practitioners from interactive art and interaction design to model existing interactions and explore new interactive dialogues using RMT. The workshop enabled collecting feedback on usability and functionalities of RMT while exploring additional benefits, opportunities, and potential improvements. In this chapter, we present the workshop outcomes, reflect on the discussions, and consider broader implications. We hope that these insights can not only lead to improvements of RMT, but also inform the design and development of similar tools in the future.

This chapter builds extensively on our submission to the 14th EAI International Conference: ArtsIT, Interactivity & Game Creation (Xu et al., accepted and in print). It is structured as follows: In the next section, we introduce the generative component of RMT, detailing the approaches developed for generating new forms of interaction; Following this, we present a report of the workshop, including the activities conducted, feedback received, and insights shared by participants; Finally, we reflect on the workshop outcomes, discussing their implications for the ongoing design and development of RMT, as well as considering the broader benefits and challenges of modelling interactive art.

7.2 Approaches to Generating Interactive Dialogues

As shown in Figure 7.1, the generative component of RMT can be accessed via a dedicated webpage with its own interface [2]. This component is built upon the description component and is realised with the following two approaches.

The first approach leverages the database's existing artwork collection to generate new elements and behaviours. The *Generate element* button next to the element index automatically populates descriptors—such as *type* and *actions*—using randomly selected entries from the database. In contrast, the *Complete element* button only fills in empty input fields, allowing users to partially specify an element. Given the diversities of elements in the collection—including human, nonhuman organisms and technical systems—we believe that this feature can stimulate the discovery and imagination of new interactive behaviours and unconventional roles of elements.

The second approach takes advantage of RMT's formal structure to randomly create new connections in terms of new forms of communication and action conditions. Once elements are specified, users can click on the respective *Generate* button to generate new forms of communication and conditions. The tool then randomly assigns receiving elements, selects possible values for relevant descriptors, and combines triggering actions and reactions. Each

[2] https://modeltool.liacs.nl/generate.html

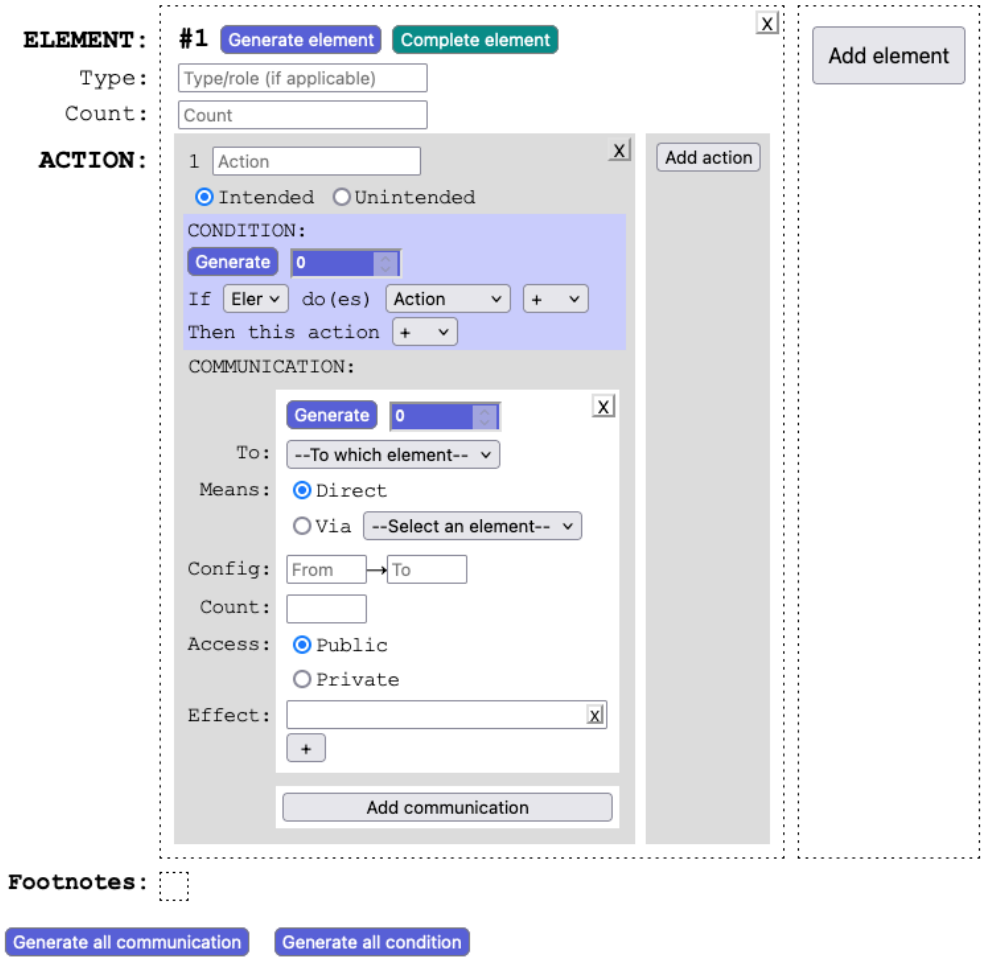

Figure 7.1: Screenshot of the generative component interface.

random combination is associated with an index number, allowing users to browse the different generations back and forth.

Before using the generative functions, users must first specify the interaction layout, including the number of elements, actions, and communications. They can either start with an empty worksheet or modify an existing interaction loaded from the database. It is important to note that these generative functions were developed as an exploratory experiment. The purpose is to provoke discussions about the generative potential of RMT, rather than to present them as definitive or finalised solutions.

7.3 Workshop on Describing and Generating Interactions

The half-day workshop, titled "Modelling and Creating New Interactive Dialogues in Interactive Art", was held at the 13th EAI ArtsIT conference in New York University Abu Dhabi Campus[3]. Seven participants, all professionals in interaction design and Human-Computer Interaction (HCI) research, attended the workshop. Two participants had to leave early due to other commitments, leaving five active participants for the hands-on exercises and discussions. The workshop was designed with the following main objectives:

- To introduce RMT to the participants;
- To evaluate the capability of RMT in modelling and visualising interactions;
- To assess the potential of RMT for generative new ideas for interactive dialogues;
- To create of new forms of interactive dialogues that do not yet exist.

Due to time constraints, the final objective—creating new interactive dialogues—was not fully addressed. Instead, the workshop was divided into two parts, focusing on the first three objectives.

In the first part, we introduced the background and purpose of RMT, followed by an explanation of the description and visualisation components. A brief demonstration was provided, showcasing how to describe an interaction using RMT with a basic example. Participants were then instructed to use RMT to describe an interactive dialogue of their choice. This segment concluded with participants presenting their own modelled interactions, followed by a group discussion where they shared their experiences and initial impressions of RMT.

The second part of the workshop concentrated on RMT's generative component. We introduced the generative functions, explained their underlying principles, and demonstrated their use. Participants were encouraged to experiment with these functions and conceptualise new forms of interaction. Following this exploration, participants shared their results and provided feedback on RMT's generative features. The workshop concluded with an open discussion, allowing participants to share general remarks and suggestions regarding RMT and the workshop itself.

7.4 Workshop Outcomes

In this section, we present the main outcomes of the workshop, including the visualisations of the interactions modelled by the participants.

[3]Official event page: https://artsit.eai-conferences.org/2024/workshop-session-modelling-and-creating-new-interactive-dialogues-in-interactive-art/

Overall, participants praised the simplicity and intuitiveness of RMT's interface, as well as the clarity of the visual symbols. During the modelling exercise, three participants successfully described their own interactive works using RMT. These interactions included: an augmented reality application that animates a picture in a textbook when users point their mobile phones at it (Figure 7.2); an application that plays an audio track accompanying a painting when users press a button (Figure 7.3); an interactive installation that translates a user' s heartbeat and respiratory signals into audio and visual biofeedback (Figure 7.4).

With our assistance, one participant managed to describe a basic interaction involving human participants and a fictional art system that plays back audio when participants activate a hotspot. In the end, only one participant was unable to successfully model an interaction using RMT.

During the generative exercise, participants did not propose any new forms of interaction. However, the exploration did stimulate discussions about the generative functions themselves, including their potential and limitations. These conversations, along with feedback on the description and visualisation components and general remarks about RMT, provided valuable insights. For clarity, we have grouped them into thematic categories, which we present in the following subsections.

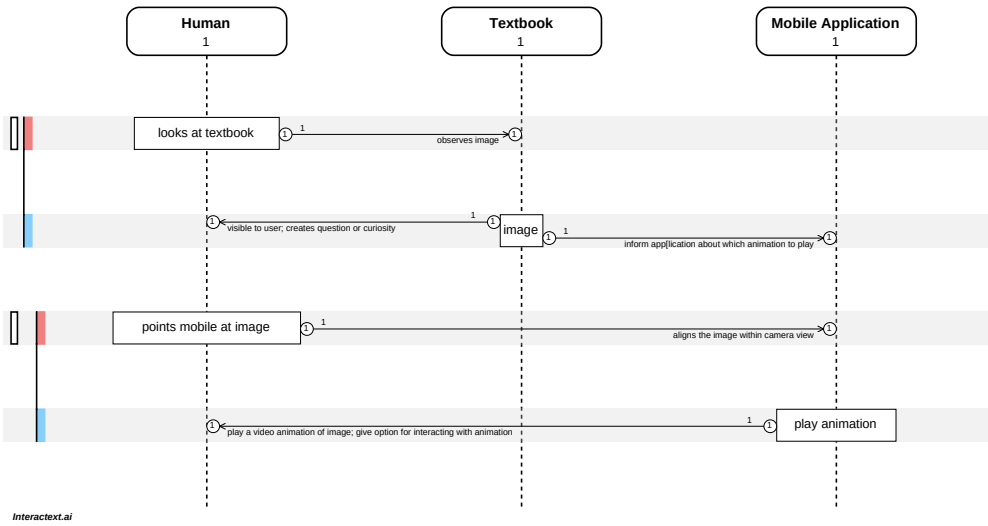

Figure 7.2: Visualisation of user interaction with an augmented reality application described by the participant.

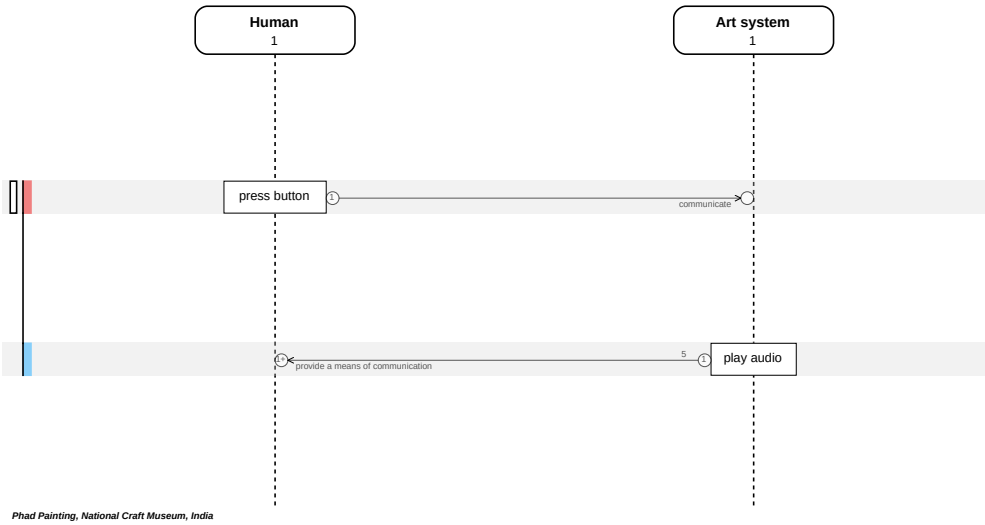

Figure 7.3: Visualisation of user interaction with an application accompanying a painting described by the participant.

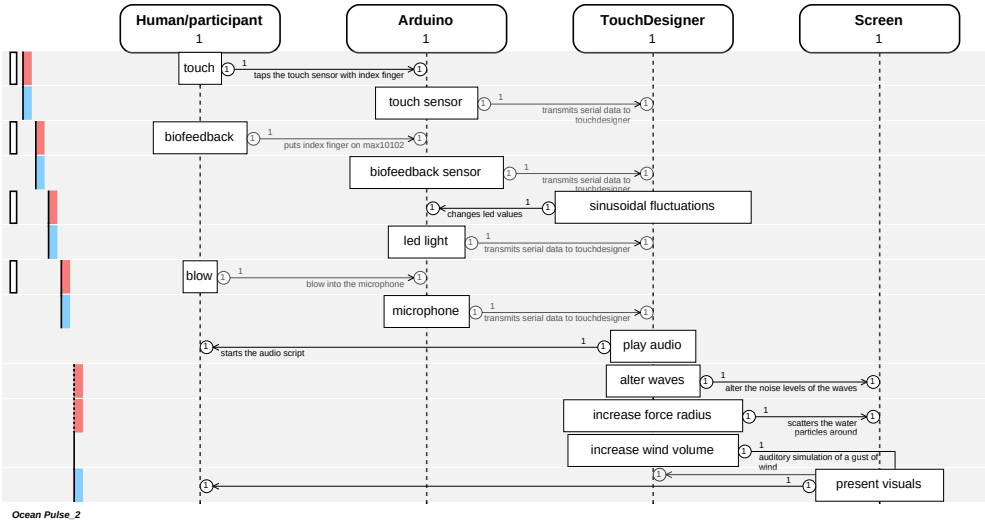

Figure 7.4: Visualisation of participant interaction with a biofeedback-based installation described by the participant.

7.4.1 Interface Design Issues

During the workshop, participants identified several design issues with the current interface of RMT. Some of these issues related to a lack of clarity in the terminology used. For example, some participants were hesitant to click the *Unlock* button, which generates an editable copy of a locked description, mistakenly believing that it would overwrite the current description. Similarly, while "condition" was frequently referenced, this term was not explicitly annotated within the interface. Additionally, one participant noted that in input fields referencing other elements, only their index numbers were used. They further suggested that including the element type alongside the index would make the interface more intuitive and "humane".

Participants also highlighted the absence of adequate feedback or error messages upon malfunctioning of RMT. As creators of RMT, we were accustomed to its quirks and had developed a habitual way of navigating around potential errors. During development, we relied on the browser console for diagnostics and debugging. Consequently, a robust feedback mechanism to alert users to errors had not yet been implemented. This lack of feedback left participants confused when RMT did not perform as expected, hinting at the need for more reliable error handling and clearer guidance.

7.4.2 Linking the Description and Visualisation Components

In addition to the technical design issues, participants suggested several general improvements to enhance the description process. The most prominent recommendation was to create a more seamless connection between the description and visualisation components. At the time of the workshop, the visualisation only updated when users clicked the *Visualise* button below the input fields. Consequently, the displayed visualisation might not reflect the most up-to-date description, leading to potential discrepancies and confusion. Participants proposed that automatically updating the visualisation as they describe an interaction would provide more timely feedback and potentially minimise errors.

Another suggestion involved the positioning of the visualisation. Participants noted that placing the visualisation below the input fields limited its usability during the modelling process. They recommended displaying the visualisation side-by-side with the input fields, for example, by opening it in a separate window and displaying on an additional screen. This arrangement would allow users to interact more effectively with the visual graph while working on their descriptions, without constantly needing to scroll down for the visualisation.

Participants also addressed the benefit of greater visual coherence between the input fields and the visualisation. For instance, they suggested using distinct colours to represent different elements and their actions across both components, making it easier to identify corresponding

descriptions. Finally, participants expressed a desire for the ability to manipulate the visual graph directly to alter the description. Creating a bidirectional connection between the description and visualisation components would enable more flexible and intuitive editing, thus enhancing the user experience.

7.4.3 Challenges and Creative Adaptations

During the modelling exercise, we observed that participants often began by browsing the suggestion lists attached to the text input fields, selecting options that suited their needs. This approach is directly reflected in the final descriptions. However, some participants still reported confusion regarding certain concepts used in RMT, for instance, they hesitated to specify an action or a form of communication, as the distinction between these two was not immediately clear to them. Confusion about the concepts was the primary challenge participants encountered when using RMT.

It is interesting to note that participants adapted certain concepts within RMT in ways we had not initially anticipated. For instance, the concept of an element refers to an independent actor, typically a biological or technical system. In practice, however, some participants used RMT to break down the technical system into smaller components, treating these as separate elements. As shown in Figure 7.4, the participant divided the biofeedback system into different subcomponents, describing each as an independent element. Alternatively, in Figure 7.2, the participant referred to the textbook itself as an independent element within the interaction. These creative adaptations highlight the flexibility of RMT to suit broader needs and suggest potential refinements to the definitions of its core concepts.

Additionally, in Figure 7.4, we noticed that the participant did not maintain a consistent level of description across all elements. For instance, the actions performed by the Arduino were described as the various sensors attached to it, rather than as distinct behaviours. There was also some confusion between actions and their effects. For example, the touch and blow actions of the human participant were simply reiterated on their effects, blurring the conceptual distinction between the two. As such, the roles of these actions in the interaction were not clearly articulated in the description.

7.4.4 Learning Exercises

During the discussion, participants noted that their confusion regarding the use of RMT, as described earlier, was partly due to their unfamiliarity with it. Since they did not receive any preparatory materials prior to the workshop, this was their first encounter with RMT. Although

we demonstrated its basic usage, this was insufficient for them to fully grasp its scope or how to apply it effectively.

In response, participants suggested that introducing a simple, concrete example of an interaction, followed by a step-by-step demonstration of how to describe it using RMT, would help clarify how RMT's various concepts map onto different aspects of an interaction. They also proposed that including basic hands-on exercises, such as sketching an interaction using RMT's visual symbols, would further aid in internalising both the concepts and the application process.

7.4.5 Application Scenarios

In addition to exploring the technical and design dimensions of RMT, participants identified several potential application scenarios. One prominent scenario refers to the use of RMT—particularly its visualisation capabilities—to facilitate communication between artists and development teams. A participant highlighted the challenges artists often face when conveying artistic concepts to developers and engineers, who may struggle to interpret these ideas accurately. The participant noted that RMT's visualisation helps to establish a shared mental model among team members, offering a concrete blueprint for discussion. This enables more focused and productive conversation, bridging the gap between artistic vision and technical implementation.

Participants also proposed that RMT could serve as a valuable tool for evaluating and assessing interactive artworks. For instance, audience members could be invited to describe their experiences of an artwork using RMT, and these descriptions could then be compared with the artist's original intent. Such comparisons could reveal discrepancies between the intended and perceived experiences, providing insights into the effectiveness of the artwork's design.

Finally, participants suggested that RMT could play a critical role in the conservation and archiving of interactive artworks. Given the complexity of these artworks—which often involve dynamic systems incorporating digital technologies—it is essential to document not only their physical components but also their interactive behaviours and intended audience engagement. RMT provides a consistent tool for describing such artworks and generating related datasets, enabling their systematic classification and indexing. This also paves the way for developing dashboards that allow researchers and practitioners to browse, search, and investigate interactive artworks in greater depth, thereby supporting both scholarly analysis and long-term preservation efforts.

7.4.6 Customising the Generative Component

After experimenting with the generative component, participants observed that the outcomes produced by the current generative functions were interesting and had the potential to serve as a source of inspiration. However, given the wide variety of interactive artworks in the database and the randomisation-based generative process, they noted that the resulting outputs were either too absurd or impossible to materialise.

Building on this feedback, participants proposed that allowing users to select and curate their own database could lead to more meaningful and relevant results. Specifically, users can select interactive works with shared characteristics or combine different forms of interaction that align with their creative goals. This tailored approach would allow the generative functions to explore more coherent and purposeful combinations. Moreover, it would provide users with greater control and focus for a more directed and productive creative process.

7.4.7 Co-creation with Artists and Designers

To further develop RMT into a practical resource that enhances the creative workflow of artists and designers, participants proposed that we could adopt a co-creation approach. This collaborative process could involve these practitioners using the current RMT as a foundation to refine and expand its functionalities. One potential method is through structured workshops, where artists and designers are invited to reorganise or subvert the existing interface layout and brainstorm ideas for new generative functions and strategies for their application. Such an iterative and participatory design process would ensure that the final tool is more closely aligned with the needs, preferences, and habits of its intended users.

7.4.8 Relations to Existing Modelling Tools

The discussion also touched upon existing modelling tools and how RMT could draw inspiration from them for its further development. One notable example is the Unified Modelling Language (UML), which is a standardised visual language used for modelling, designing, and documenting software systems (Eriksson et al., 2003). UML encompasses a range of diagram types, each addressing different aspects of a software system and its user interactions. Given that software development is often integral to the creation of interactive artworks, where the behaviours of art systems are frequently orchestrated by software programs, participants suggested that RMT, particularly its visualisation component, could benefit from the established norms and symbols already in practice within UML.

Furthermore, participants considered how a modelling tool could extend its utility to con-

tribute directly to the development of a system or interaction. This insight is mainly inspired by the Building Information Modelling (BIM), a tool used in architectural practice to create digital representations of a building's physical and functional characteristics (Bryde et al., 2013). BIM integrates programs capable of automatically estimating required materials and their associated costs, streamlining the design and construction process. Drawing parallels to this approach, participants speculated that RMT could be connected to a program capable of simulating the behaviour of an art system based on its description. Such an integration could elevate RMT to a more practical resource for system development, bridging the gap between conceptual design and technical implementation.

7.5 Reflections and Beyond

Based on the results presented in the previous section, the majority of participants were able to grasp the core concepts of RMT and adopt it to some extent following a brief introduction during the workshop, despite having no prior preparation. It was particularly encouraging to observe that RMT stimulated meaningful discussions about its potential applications and the broader topic of interaction modelling. Given that most participants had backgrounds in HCI research and interaction design, these conversations naturally gravitated towards the design and modelling implications of RMT. Drawing on the insights generated during these discussions, we synthesised our reflections on the workshop outcomes and further developed the discussion under the following five topics.

7.5.1 Improvements to the Relational Modelling Tool

One significant outcome of the workshop was the identification of design issues and software bugs within RMT. In response, we iterated on RMT to address these concerns. Firstly, we automated the visualisation component to refresh whenever a data entry is changed in the input field, ensuring that the visualisation reflects the most up-to-date description. For the input fields, we replaced the term *Unlock* with *Copy* to clarify the safety of preserving the locked description. Additionally, we added the term *Condition* to label the section specifying the conditions for each action. To enhance usability, we added the display of an element's type following its index when it is referenced elsewhere. Furthermore, we resolved some software bugs related to visualisation rendering. To improve error handling, we implemented a pop-up window with error messages whenever an issue arises during execution.

While participants acknowledged that more practice with RMT would be necessary to fully grasp its conceptual foundation and application process, the workshop also underscored

the need to refine and expand the definitions of key concepts within RMT and its underlying relational model.

The current definition of element refers to "individual actors exhibiting the same or similar set of behaviours", while action is defined as "something that is done or performed by the element to participate in the interaction". These definitions are suitable for participants that actively influence their environment, such as biological organisms or technical systems programmed to act and react. However, they prove insufficient when considering static objects as elements. For instance, in Figure 7.2, the textbook is an independent element that plays a significant role in the interaction. Unlike the mobile application or human participant, the textbook does not actively impact other elements but influences them by presenting information that is captured by the other elements. Here, we propose adjusting the definitions to better account for passive participants, such as objects. The revised definitions are as follows:

- *Element*: Independent actors that play a significant and unique role in the interaction. An element can be a biological organism, a technical system, or an object.
- *Action*: An activity, behaviour, or natural response carried out or afforded by the element that has significant effects on shaping the interaction.
- *Communication*: The process by which an action reaches the receiving elements, which can be imposed by the acting element or actively captured by the receiving element. An action can be directed at multiple elements, creating diverse forms of communication.

7.5.2 Designing Intuitive Interface

A key lesson highlighted during the workshop regarding interface design is the importance of providing clear and timely feedback on the effects of users' actions. Specifically, this feedback can take the form of informative messages that alert users to mistakes and suggest solutions, guiding them through mistakes and reducing their fear of making errors. Such feedback could be enhanced with predefined suggestions or machine learning tools with better contextual awareness. Additionally, immediate feedback is also crucial, as highlighted by participants' preference for automatically updating the visualisation when input fields are modified. Such real-time updates maintain coherence between inputs and outputs, sufficiently informing users of the consequences of their actions.

Integrating the description and visualisation components can further optimise the workflow for users. Direct manipulation of visual objects aligns more with natural interactions with physical objects. For instance, some online UML tools enable users to create visual elements and annotate them directly (Lucidchart, 2025). However, structured input fields ensure

that all described aspects are properly addressed, enabling comprehensive documentation and data aggregation. Therefore, if the visualisation and description components were to be combined, a truly intuitive and productive interface would need to balance the strengths of both approaches—preserving the structure of formal input while enabling direct manipulation of visual symbols.

Discussions during the workshop also highlighted the learning curve associated with adopting a new tool. Modelling tools like RMT are often built on specific theoretical constructs, requiring users to familiarise themselves with these terms and internalise them before using the tool effectively. Therefore, providing basic exercises linking the concepts used in RMT to real-world examples could significantly lower the barrier for first-time users. When designing modelling tools of this nature, it is crucial to consider users with varying levels of expertise. Offering exercises, tutorials, and documentations tailored to new users can help them not only learn how to operate the tool but also understand the underlying concepts and perspectives embedded within it.

7.5.3 User Involvement in Design and Development Process

Another insight from the workshop is the importance of user involvement at various stages of developing tools like RMT. As demonstrated in the workshop, engaging participants in hands-on exercises with RMT allows us to identify design and software issues that otherwise went unnoticed. Moreover, these activities also provide tangible materials and experiences to spark discussions about RMT's potentials and its broader implications for the development of interactive art.

Beyond prototype testing, participants highlighted the value of co-creation, where designers and end users collaborate to ideate, develop, and refine solutions, ensuring diverse perspectives are integrated in the final design (Sanders & Stappers, 2008). Here, such user inputs can be crucial for determining the interface layout and shaping its functionalities. For instance, participants suggested greater control over RMT's generative component, such as customising the database. Engaging practitioners in brainstorming sessions could generate ideas for new features, aligning functionalities with their creative processes. Co-creation could also lead to more customisable interfaces, allowing users to adapt components to their workflows.

However, it is crucial to recognise that the outcomes of co-creation are closely tied to the participants' backgrounds. Clearly defining co-creation objectives and selecting participants accordingly is essential. For example, involving artists and designers is appropriate for tools supporting creative processes, while researchers and curators are better suited for tools aimed at analysis and curation.

7.5.4 Benefits and Limitations of the Relational Modelling Tool

As highlighted by participants, RMT provides an easy-to-understand interface that facilitates the application of the relational model to analyse interactions. RMT enables users to effortlessly define the structure of an interaction by adding or removing element profiles, actions, and communications. Moreover, its open and modular architecture also allows them to creatively adapt the tool to describe processes beyond the scope defined by the relational model. During the description process, RMT employs drop-down menus to either constrain inputs (e.g., specifying the recipient of a communication) or provide suggestions (e.g., element types and communication effects). While this mechanism certainly facilitates data entry, it may inadvertently encourage reliance on existing data, potentially producing too similar descriptions and overlooking the unique characteristics of individual artworks.

Another benefit of RMT lies in its potential for generating new interactive dialogues through data-driven techniques. However, the outcomes from the exercise using RMT's current generative component indicate that further considerations are necessary to fully realise this potential. We observed that simply populating the input fields with random data entries does not automatically result in new forms of interaction. While randomness may inspire the discovery of new elements, behaviours, or connections, a completely random configuration of elements is unlikely to produce a meaningful interaction. In complex scenarios involving multiple elements, the interaction may not take on the form of a one-to-one dialogue; however, the total configuration should still enable a mutually responsive interactive dynamic between two elements, potentially mediated by other elements. Thus, when developing generative features, the focus should not only be on exploring combinatory novelty, but also on identifying the interactive dynamics within the novel ideas.

Furthermore, RMT's formal structure and visualisation highlight certain limitations within the relational model's conceptual foundation. Although actions may appear to be properties of individual elements, they remain relational in nature because an action's significance and meaning are determined by both the acting and receiving elements. This is particularly evident when the acting element is passive while the receiving element is actively gathering information about it or its behaviour. For instance, as shown in Figure 7.2, the image of the textbook is *captured* by the human participant; however, within RMT, we consider the textbook to be *providing* the image, reflecting the flow of information from the textbook to the participant. Although we have refined the definition of action and incorporated its intention, it can still be conceptually challenging to differentiate various types of actions at a glance. In the future development of RMT, it is interesting to experiment with different ways to specify actions and reactions and indicate how they influence each other.

7.5.5 The Relational Modelling Tool in Context

Although participants responded enthusiastically to RMT as a potentially versatile tool for advancing interactive art in various contexts, it is important to stress that the primary goal of both RMT and the relational model is to facilitate understanding of interactive dynamics and the creation of new interactive dialogues. The model emphasises the relational exchanges among elements, treating them equally regardless of their type. This perspective is particularly valuable for uncovering the roles that individual elements play in an interaction and for envisioning unconventional roles they might assume. However, depending on the specific application scenario, a more detailed behavioural diagram of an art system—one that specifies internal processes and breaks down subcomponents—may prove more practical for communication during art system development, as well as for conservation and archiving purposes.

At first glance, RMT—particularly its visualisation component—appears similar to the UML sequence diagram. Sequence diagrams are widely used to depict interactions among systems, subsystems, and users, with the horizontal axis representing the interacting elements and the vertical axis illustrating the time sequence of messages or calls (Bell, 2023). Moreover, sequence diagrams provide notation for grouping messages to indicate conditional flow (e.g., "if-then-else" statements or "while" loops) and enable referencing other sequence diagrams within the current one. Nevertheless, we would like to point out some key differences between RMT and the UML sequence diagram.

First, sequence diagrams are primarily aimed at modelling user interactions with commercial software, where interactions are typically structured, ordered, and goal-oriented. In contrast, interactive art often involves more open-ended, erratic, or exploratory forms of interaction. RMT offers a more flexible framework, capable of capturing the layered conditional links among actions and allowing for complex relational structures. Additionally, while sequence diagrams specify the messages exchanged among elements, they do not account for the effects and intentions of actions in the way RMT does. Such considerations are critical for analysing the roles of elements and for understanding the broader dynamics that define an interactive artwork. Despite these differences, future development of RMT could draw inspiration from the well-defined notation system and the nesting structure of sequence diagram, potentially allowing for more clarity and capacity for modelling layered interactions.

7.6 Discussion

In this chapter, we present our workshop for evaluating the description and generation capabilities of RMT with a broader user group. The workshop included hands-on exercises and

discussion sessions, enabling participants to share their experiences, feedback, and suggestions. With inputs from workshop participants, we are able to refine key features of RMT, gather insights for its future development, identify its benefits and limitations, and clarify its scope and positioning.

When modelling interactive art, it is important to recognise the limitations and biases inherent in any framework or tool. Modelling often requires simplifying complex, dynamic systems or scenarios into structured representations, which can lead to the omission of certain nuances or emergent behaviours. These complexities may be difficult to fully capture with predefined categories or descriptors. Additionally, the act of modelling inherently reflects the perspectives and priorities of the model' s designers, potentially privileging certain aspects of interaction (e.g., relational dynamics) while overlooking others. Therefore, it is essential to remain mindful of both the benefits and limitations of a modelling approach.

Furthermore, as previously discussed, the workshop participants were primarily researchers in HCI. In the future, it would be valuable to extend the evaluation of RMT to artists working in interactive art. This could provide insights more directly relevant to the development of interactive artworks, particularly in fostering new forms of interactive dialogue—an aspect that was not fully explored during the workshop.

Through this study, we hope to emphasise the importance of evaluation in the iterative development of modelling tools in general, not only as a means of generating practical feedback but also as a driver for advancing research and future developments.