

## What matters for ritual visualization

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# What matters for ritual visualization

Towards a design tool for the description and the composition of rituals

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**Abstract:** Our lives are highly shaped by rituals. The way we wake up, the way we prepare tea or coffee are two of the many rituals many of us have constructed. As they structure our everyday lives, it is crucial to understand how to design them from a kansei design perspective. This Research-through-Design inquiry contributes to a larger research of addressing the way to design rituals. An annotated showcase of three ritual design projects is proposed. From the analysis of these three projects, we suggest 11 points of attention for the construction of a ritual visualization tool. This tool is expected to be used not only to support the analysis and the assessment of rituals, but also to contribute to the composition of rituals, towards the design of experientially rich rituals from an interaction perspective.

**Keywords:** Ritual, visualization tool, interaction design, Research-through-Design, Annotated portfolio.

## 1. INTRODUCTION

Our lives are highly shaped by rituals. The way we wake up, the way we leave or enter our home are two of the many rituals many of us have constructed. And they structure our everyday lives. However, designing rituals remains challenging because of the nested structures of events within a ritual (complexity in time) and the required consistency between the ritual and the involved artifacts (complexity in interaction). It is clear here that the affective relation of people with their environment, and therefore their kansei is a key aspect of this research. In this Research-through-Design inquiry, we look therefore at how to describe rituals so it supports kansei direct design (Lévy, 2014).

We differentiate here rituals from routines by the values and the foci a person puts in the activity (s)he is engaged in. Both can similarly be described as a quasi-stable sequence of actions aiming at an expected result (e.g., making tea in order to obtain a cup of tea). The quasi-stability of these sequences resides in the fact that they may non-disruptively evolve, without being called into question by the engaged person. However, they differ as routines value the quality of the result (e.g., the taste of tea) and rituals the quality in the doing (e.g., making tea).

From this differentiation, we can suggest *engagement* as one of the criteria to assess the ritual and the perceived quality of the ritual. An explanatory example of such influence is described in the Rozendaal's doctoral thesis on engagement (Rozendaal, 2007). In the introduction of his thesis, he describes two ways of making a meal: one is based on an all-prepared packaged meal ready to be put in the microwave oven, the other one is prepared from scratch, buying the fresh aliments at the market and cooking them at will. The earlier is mainly valued for the result, and possibly for the efficiency of the process leading to this result: a meal ready to fill the stomach out. There are very little considerations on richness of the process, and the engagement of the user in this process seems to be nearly disregarded if not minimized. The latter is possibly valued as much or more for the journey (i.e., buying the aliments and cooking), as it is for the result, the meal to be savored. The main value of the journey relates to the user's involvement and experience through this journey, and therefore to the user's engagement.

In this research, focusing on rituals, we are especially interested in the qualities in the journey, considering the involvement of the user in the process, and of other aspects, either artificial, contextual, or procedural.

We also distinguish everyday ones (e.g., making tea at home in the morning) and ceremonial rituals (e.g., the Japanese tea ceremony). Whereas everyday rituals are often structured by rules which are mostly informal and individual, ceremonial rituals are based on formal and shared rules within a community of practice.

Both comparisons (routine/ritual and ritual/ceremony) are rather based on a continuum rather than a strict distinction. The continuum between routines and rituals is defined by the focus on the experiential quality of the doing. The continuum between rituals and ceremonies is defined by the level of formality of the sequence of actions. Therefore, one cannot clearly distinguish routines, rituals and ceremonies, unless one of them is at the extremity of one of the aforementioned continuum (e.g., the Japanese Tea Ceremony).

## **2. RESEARCH INQUIRY**

### **2.1. Research objectives**

As stated in the introduction, rituals are essential in the framing of everyday life, and therefore should be of a high consideration by design. We focus in this research on rituals from the perspective of kansei design. It remains a challenge for designers to design rituals, i.e., to design for better quality in the interaction within rituals, impacting the perceived values of the rituals. In a previous paper (Lévy, 2015), we have pointed out three major research objectives to be addressed:

- *Describing daily rituals from the perspective of the performer(s)* – From an interaction design perspective, describing rituals is a complex matter. Among others, the person's perspective and affective aspects need to be taken into consideration (Desmet & Pohlmeier, 2013). Moreover, such a framework should be contributing to the activity of the designer. This research objective

is therefore the creation of a descriptive framework for rituals, in a way that it supports the designer's intervention and evaluation.

- *Designing daily rituals* – The aim is to actually inquire through designing actual daily rituals. The act of designing and its impacts on rituals will be the matter for creating insight on how to design (for) rituals. However, the Research-through-Design (RtD) (Zimmerman, Stolterman, & Forlizzi, 2010) challenge of this project is different from often published RtD researches. Classically, RtD looks at either the human-machine interaction (e.g., (Deckers & Lévy, 2012)), or at the system level, increasing complexity through multiple and connected interactions (e.g., (Frens & Overbeeke, 2009)). The current research focuses multiple interactions constituting nested events - how meaning and values emerge through the timely process of the ritual – increasing complexity through a temporal dimension. This research objective is to see how to design with the temporal complexity of rituals.
- *Evaluating the impact of a design on the experienced quality in daily rituals* – Finally, it is of course important to be able to evaluate a design of ritual. Providing a reliable means to evaluate experienced quality in ritual is therefore necessary in this project. This research objective is therefore to provide a reliable means to detect how a design affects the changes of behavior patterns (Pentland & Liu, 1999; Vastenburg & Herrera, 2010) and the experience.

## **2.2. Previous findings**

In the aforementioned paper (Lévy, 2015), we explored the notion of ritual through a workshop, mostly focusing on the second research objective, and more strongly underlying the challenge of the first research objective. Main findings are briefly explained here.

All everyday rituals we have encountered so far from a design perspective were not designed from scratch, but from an existing routine or ritual. The design aim was therefore to qualitatively enrich an existing habit. Therefore, to the extent of the inquiry, it is still unknown if it is either possible or not to design a ritual from scratch, and if so how. However, what have been pointed out is the main two possible starting points for designing a ritual. One is to start with a given set of artifacts and explore the sequence of actions to trigger higher quality in the interaction with the set throughout the ritual. Second is to reconsider the set of artifacts in order to enhance the experience through an already existing sequence of actions. Although further iterations in the design invite the designers to explore both aspects, a remaining unsolved question is the impact of the choice of the starting point on the design process and on the design outcome (contribution to the second research objective).

Although rituals are described as a sequence of actions taking place in a delimited span of time and space, it appears that the practice of daily rituals has pervasive impacts on other daily experiences. In other words, the quality of engagement in a ritual affects the way one engages in other activities, and by extension ethically relates to the world. Not only this stresses even more the importance of rituals, but also shows a more complex temporal structure of rituals: the event-nested structure of the ritual has implications beyond the nest. (contribution to the third research objective).

Finally, the complexities in rituals, from the perspective of designing, are multiple. First and foremost, rituals are temporally complex: rituals are composed of nested and overlapping events. For example, making tea can be a sub-ritual of morning preparation that overlaps watching the news (e.g., if one turns on an electric kettle, and open the news on a computer while hearing the water boiling, then finally watch the news after ending the preparation of the tea). As we will see later, the temporal complexity of rituals impacts the way of composing them. Second, the great amount of artefacts and subjects that may be involved in a ritual creates a complexity in the way these elements

may interact with each other. This form of complexity is addressed by systems design (Frens & Overbeeke, 2009). Third, the attentional complexity, which is related to the temporal complexity, demands the subject to possibly pay attention to many aspects at the same time. This complexity requires one to consider central and peripheral attention (Bakker et al., 2014). Fourth, and last presented here, is the variability of choices within the ritual, which according to the notion of engagement provides possibilities of growth and of adaptability of the ritual (e.g., the choice of tea, or of the order between two different actions).

These complexities appear as essential to rituals, and as challenging for design. It is therefore important to pay attention to them in this research aiming at providing understanding and means to design (for) rituals (contribution to all research objectives).

### 2.3. Current inquiry

The current step of our research focuses on ritual visualization. We tackle here the challenge of ritual visualization through a RtD approach, in order to create means for both ritual description and ritual composition. In other words, by creating such a visualization tool for rituals, we expect not only to support the clarification of flows in rituals, but also to support the actual design of these rituals.

This step is structured by three stages:

- first an inquiry in the form of an annotated portfolio (Bowers, 2012) to point out main aspects to be taken into consideration for the creation of such visualization tool;
- second the actual formation of the tool by implementing the aforementioned considerations;
- third an assessment of the proposed tool to valid its relevance with regard to the research objectives.

This paper presents the findings based on the annotated portfolio, i.e., the results of the first stage.

## 3. ANNOTATED PORTFOLIO OF RITUAL VISUALISATIONS

As Browsers (2012) recalled, Gaver (2012) textual accounts of artefacts are to be seen as annotations for research in design, and that “beyond single artefacts, however, *annotated portfolios* may serve an even more valuable role as an alternative to more formalized theory in conceptual development and practical guidance for design. If a single design occupies a point in design space, a collection of designs by the same or associated designers – a portfolio – establishes an area in that space. Comparing different individual items can make clear a domain of design, its relevant dimensions, and the designer's opinion about the relevant places and configurations to adopt on those dimensions.” Annotated portfolios can be used to capture similarities and differences between artefacts as elements of a RtD inquiry, and therefore trigger reflection on and clarification of the design space established by the artefacts.

The elements presented in this annotated portfolio were all rituals designed during educational activities with master students at the Department of Industrial Design of Eindhoven University of Technology, the Netherlands. Because of the theme proposed to students, all the rituals proposed here are based on the same type of activity, namely serving beverage (either tea or coffee). However, we argue that this narrowing of the design space does not significantly impact our research, as these rituals comprehend all complexities mentioned previously.

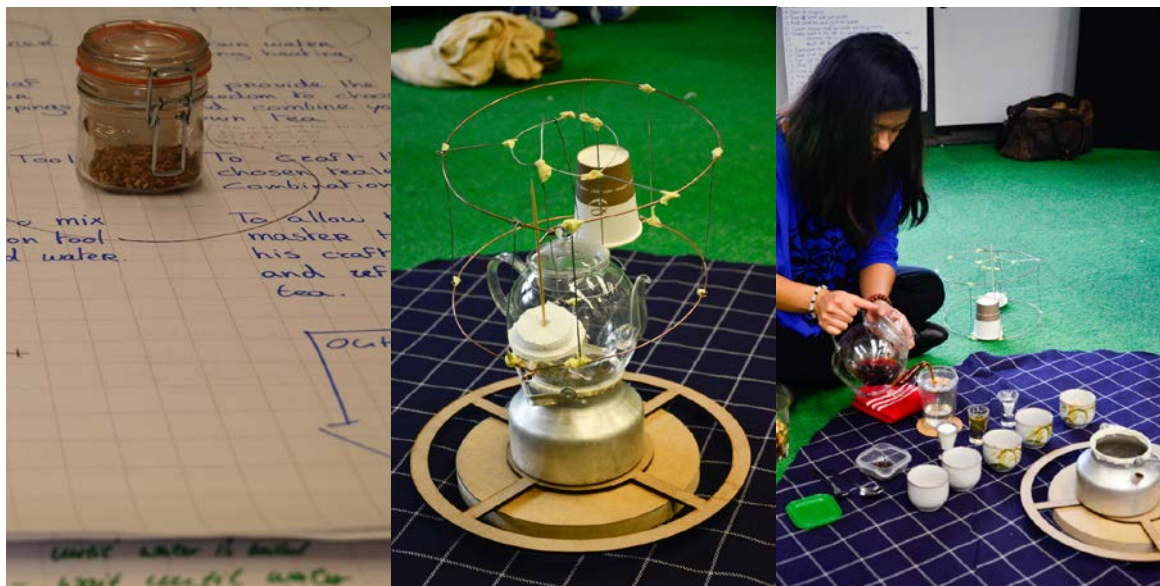
For each project, we will describe the educational conditions of realization of the project, and explain the outcomes. Then we will focus on the visualization provided as a deliverable, and analyze it to point out strengths and weaknesses. Thereafter, we will briefly synthesize our findings before

discussing in the next section the continuation of the research. More details on the projects, including visualizations and movies, can be found on the 'designing (for) ritual' webpage (Lévy, 2016).

### 3.1. Welcoming with tea

This first project was the result of a two-week workshop. More details on this workshop and its outcomes can be found in (Lévy, 2015). To initiate the workshop and set the seventeen students to a common ground, the students were asked first to read the Book of Tea (Okakura, 1906), an essay on Teatism, and then to attend a *usucha* (light tea) tea ceremony performed by a *urasenke* tea master of Japanese Tea Ceremony, an experience that none of the students has had in the past. The ceremony was followed by a discussion with two Japanese tea masters, before starting a design exploration on the making of a ritual to welcome guests. Students were then asked to *design (for) a ritual for the participants of the workshop to welcome their own friends at their own place*. It was important then to keep the design exploration at the first-person plural perspective, in order to strongly contextualize the work.

The design process was done based on three clear iterations (cf. Fig. 1). The first one consisted in exploring the current way students welcome friends home to point out valuable aspects, and then in elaborating a first sequence with related values and artefacts. The second iteration was a low-resolution design of the ritual, during which major design decisions were taken and implemented. It was ended with a first ritual performed by one host (a student) to four guests (one student, the workshop organizer, and two tea connoisseurs). Other students were observers. The ritual was followed by an interview of the guests, and by a discussion on all details of every steps of the ritual, in order to set the challenges for the next iteration. The third and last iteration was a high-resolution design, with a high care for details of both artefacts and actions in the ritual. This iteration was fully described (cf. Fig. 2) and performed in similar conditions as the second iterations.



**Figure 1:** Elaboration of the ritual (left), low-resolution prototype (middle), ritual performance (right)

The ritual visualization (cf. Fig. 2) delivered at the end of the workshop was elaborated and discussed throughout the high-resolution iteration. The representation describes the actions taken by any participant (active engagement) or followed by any participant (passive engagement), names the action and associated values. Values are stated for nearly each action, which sometimes appeared to be more force-fit than obvious. The ritual representation is timely organized in a linear

way, with a clear start and a clear end, and with clear main steps (from invitation to cleaning). Yet, loops are possible for repetitive set of identical actions (e.g., preparing the tea for each guest) [time]. Social interactions are being shown, and one-to-one interactions are distinct from social (more than 2) interactions. Yet subject-artefact interactions are not clearly stated [interaction]. The context is not clearly shown in the visualization, but appears to be inherently structural to the ritual itself [context]. The level of attention or engagement required different step of the ritual is not clear [engagement].

The strength of this visualization resides in the clarity of the actions and the flow of sequences. One can clearly understand what is expected from each participant of the ritual, and in how actions are organized in the flow of the ritual. This has the positive consequence of allowing for factual analysis of the ritual, and possibility of reproducing the rituals based on a clear and unique source of information. Although this might appear obvious for rituals, it is not trivial from an interaction design perspective, which has extensively focused on the notion of action possibilities (Kannengiesser & Gero, 2011).

Our main limitation to this visualization is that the description of the actions taken by the participants and of the relations between the participants is quite elementary. We note for instance the absence of the dynamic quality of the acts and of the level of either required or desired engagement. In other words, this visualization technique contains a clear denotative descriptive structure, but lacks of any connotative structure, which could essentially express aspects related to experiential qualities in the ritual. As a reference for comparison, the modern music notation integrates both denotative (e.g., notes and rests) and connotative (e.g., dynamics) elements, respectively constraining and offering space of interpretation for the music player.

Another aspect that may be important to consider is that, although the ritual seems to start with a preparation phase and to end with a tidying up phase, the rectilinear representation of time prevents to denote that the tidy up may already be a preparation for the next time the ritual can be performed.

# Legenda

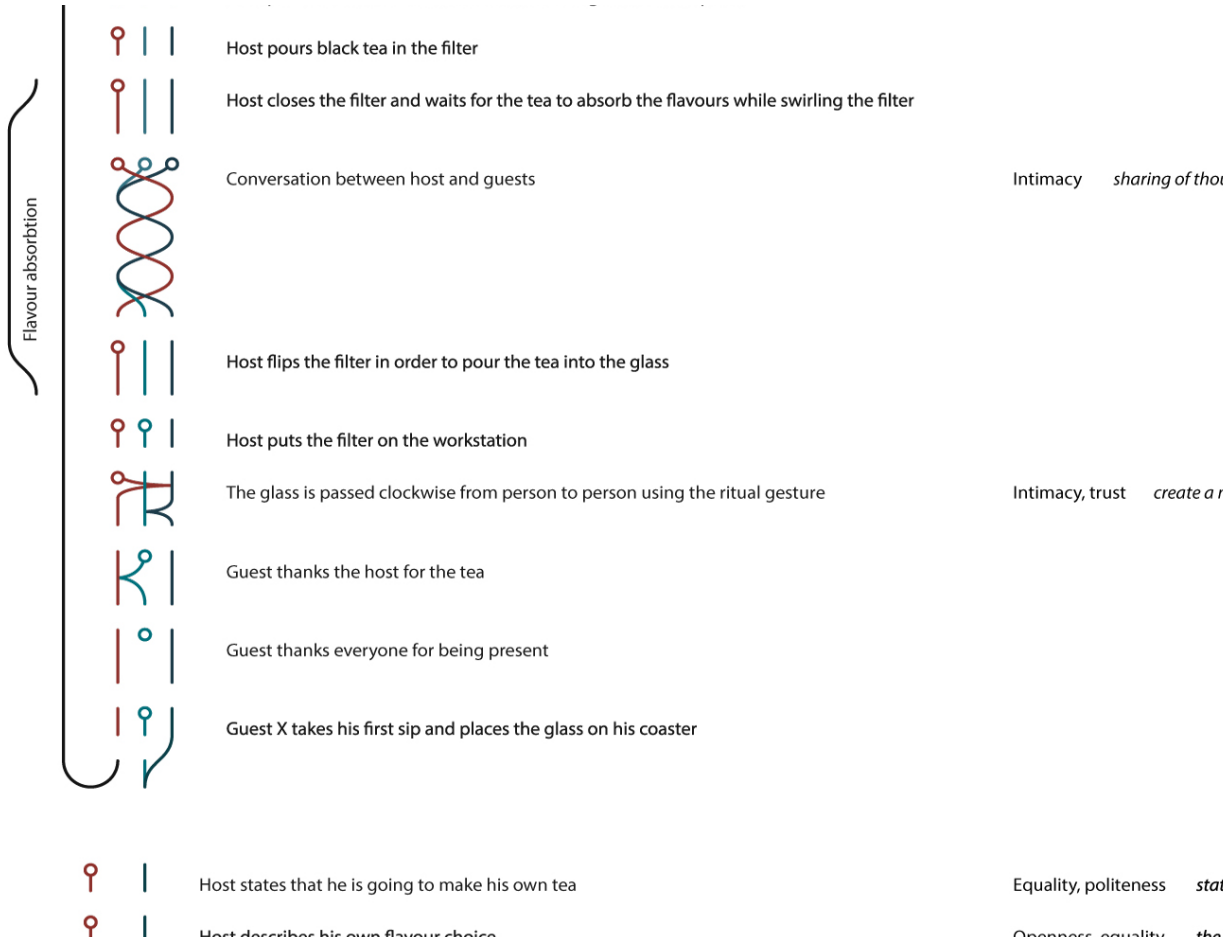
- Host
- Multiple guests
- Single guest
- || Passive engagement in current event
- Active engagement in current event

- One way activity between two participants
- Activity between all participants
- Participants enter / leave the ritual

n.x

## Actions

## Values



**Figure 2:** First ritual description (excerpt). The complete version can be seen at <http://www.plevy.fr/rituals>



### 3.2. Morning tea

The two following projects (Morning tea and Caffè per due) were designed by master students as the design project for an 8-week elective on rituals. Students were introduced about notions of rituals, and about the findings of the Welcoming with Tea project (cf. section 3.1). In this case, students were first asked to focus on one of their own rituals: preparing a drink in the morning (tea, coffee, hot chocolate...). To do so, students delivered a movie of their own 'morning ritual' and all movies were discussed. This step gave also the opportunity to shortly discuss with students about differences between routines, rituals, and ceremonies (cf. Introduction). Thereafter, students gathered in two groups, one focusing on tea and the other one on coffee. The earlier project is discussed in this section; the latter one is discussed in the following section.



Figure 3: Tea ritual set

The morning tea group was composed of 3 Asian (all of them being Chinese) and 3 European (2 Dutch and 1 Italian) students. The discussions quickly turned towards the value of tea, and the attention of making tea in various cultures. Whereas the Chinese students emphasized elegance, purity (or cleanness), and respect, Westerners emphasized functionality, fluency, and adaptability (or choice). These terms were discussed further and were listed as: fluency in use, freedom to play, meaningful waiting, purity, beauty, respect, social values, quality of taste (cf. the center of Fig. 4). Based on these values, the students designed a tea set for housemate to have tea together. This project went through continuously refining process. It started with the aforementioned values, and was iteratively tested weekly for the last five weeks (i.e., once there was something to interact with). During the last session, the ritual was fully performed with the set presented in Fig. 3.

Fig. 4 provides the visualization of the ritual. In this case, time is rendered in a circular way, showing well that the end of one ritual enables the next ritual, while here being distinctive of it [time]. Social interaction, although fundamental from design considerations, is not clearly represented (e.g., no specific mark is shown when the trays are given to the 'host' from the 'guests') [interactions]. Values were clearly constitutive of the ritual, making understandable that they are placed at the center of the visualization, in a predominant position in the process. However, as a contrast with the previous ritual visualization, the way they are, or rather should be experienced is not clear [values]. The context was here clear from the beginning: housemates having tea together. Some preliminary intentions, such as avoiding the role of host, actually did not hold: the ritual required one of the participants to take the special role, mostly by getting water to the kitchen and arranging the set [context]. The level of engagement of the participants is expressed by three levels: passive, neutral, and engaged. A participant is passive when (s)he is not concerned directly by the main action taking

place at a time. A participant is neutral when (s)he is concerned by the main action. A participant is engaged when (s)he actually actively contributing the main action taking place. We regret here that the expression of engagement is only the one related to the main action, without considering possible peripheral attention [engagement].

The strength of this visualization resides in its circular form, in the centering of values, in the possibility of level for repeating details (which could be extending to details in general), and in the visual hint of the tea egg shape. (1) The circular form enables to show how the ritual ending (often a tidying up phase) may relate to the ritual starting (often an arrangement phase). However, in this case, it may have been valuable to be more explicit about this relation. (2) The values, put at the center of visualization, indicate their central role from both the design and the experiential perspectives. The strength of this positioning of values is that the reader is always invited to refer to the intended values to understand the flow of the ritual. (3) The diagram shows an extra level of details, on how a participant can fill out the tea egg (at the lower right part of the diagram). This multi-layered representation of the ritual appears relevant and effective: different levels of reading allow for different levels of details. (4) One of the beauties of this ritual is how the tea egg is shaped and manipulated throughout the ritual. The tea egg can take four different positions which not only make it practical for the step of the ritual (storing, serving, purifying, infusing), but also embody the step. This simple aspect, strongly experienced throughout the ritual, becomes a reference of the ritual as it is clear and graspable in terms of both image and experience.

However, the main limitations we noticed here are the lack of expression of interactions among the participants. As the visualization expressed these interactions, we may even wonder if the ritual is not structured by a set of parallel actions. Social interaction, as well as subject-artefact interactions are important and their lack of representation appears critical. Also, as discussed for the previous project, the dynamic quality of the acts and the level of accuracy required by the ritual are still missing.

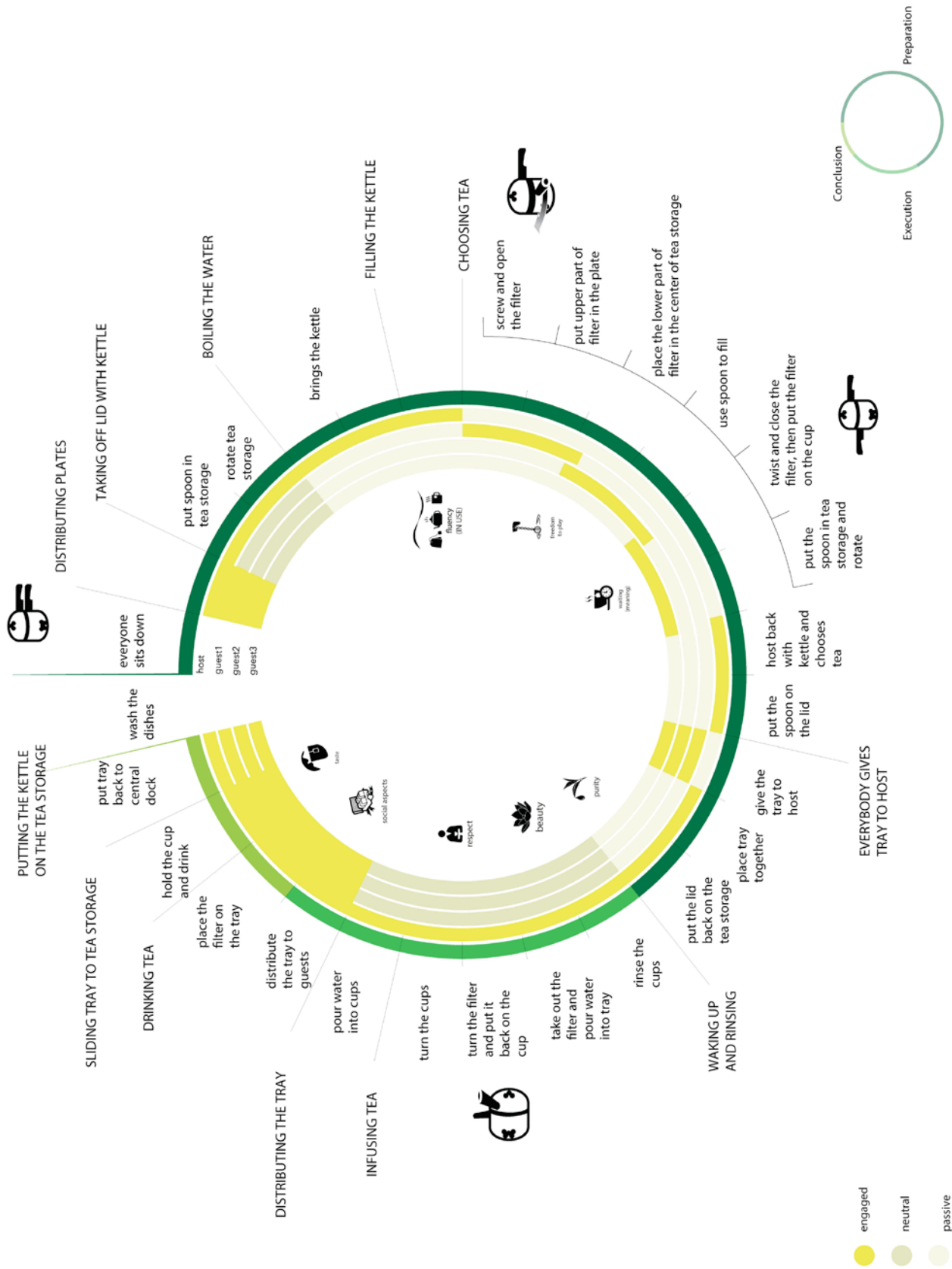


Figure 4: tea ritual description

### 3.3. Caffè per due

The morning coffee group, composed of seven students, focused on one of the student rituals, using a percolator as the main instrument to make coffee. Then, the ritual consisted in preparing and serving a breakfast espresso for a couple. Different to the previous two projects, this project started from and was built around an artefact: the percolator. From Fig. 5 (left), it is clearly noticeable that the shape of the percolator has influenced not only the shape of other artefacts in order to keep a unity, but also and consequently the organisation of the artefacts on the tray.

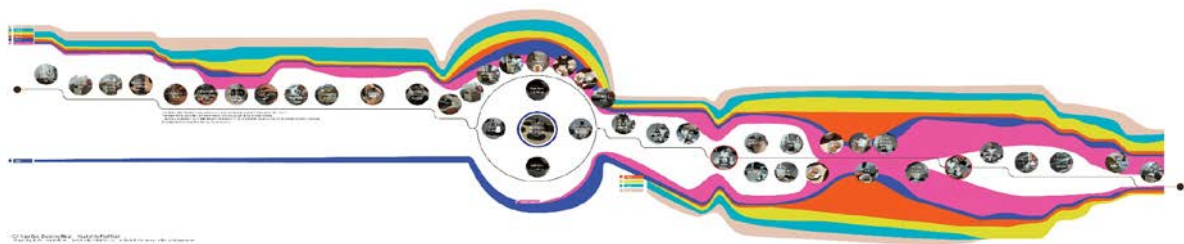


**Figure 5:** coffee ritual set

Moreover, the structure of the tray has also consequences in the behaviour of the participant, and especially of the 'host', i.e., the person making the coffee. As it is possible to see from the left picture of Fig. 5, the handles to transport the tray are in such a way that it is easy to be carried. However, as it is expected for the elegance of the degustation, the coffee is not right in front of the participant, and both the sugar and the milk are not identically accessible by both participants. Actually, an important step of the ritual takes place when the 'host' put the tray on the table in front of the 'guest', and then turn the tray of 45 degrees clockwise. This movement marks the end of the preparation and the start of the degustation. The picture on the right shows that the coffee now is right in front of the participant, and that the milk and sugar are equally accessible by both persons. Also, once both participants are done, the 'host' will turn again the tray of 45 degrees counter-clockwise, marking the end of the degustation and the start of the tidying up. These simple movements have a meaning within the ritual, and were actually designed for facilitating the degustation due to an organisation of the tray itself inspired from the percolator. We can point out here a beauty and a challenge of designing rituals: form giving, interactions, expressions, and values are all interrelated, and taking a design decision on one of them can affect design decisions on others. To design consistency in rituals, the designers need to cautiously consider the consequences of design decisions on other aspects of the rituals at all levels. For this reason, it is important that not only an overview of the ritual permanently remains questioned, but also that this questioning is done at multiple levels: physical, performative, interactive, and ethical. Throughout the three projects, this attitude of the designers has been perceived as challenging but also as being worth for the beauty and the consistency of the final ritual.

Fig. 6 provides a visualisation of the ritual. It is intentionally shown small as what will be discussed here does not need more details. However, as indicated before, the reader can access the detailed visualisation on the 'designing (for) rituals' website (Lévy, 2016). In this case, the approach was totally different from the last two. In the manner of the first project visualization, time is represented in a linear way, with a possibility of recurrence (circle). Here, actions are described by pictorials,

which is informative for the reader of the ritual, yet less contributing to the designing. Same goes for the time of interaction in the ritual, when the couple serves and drinks coffee together. The time being together is marked by a red border of the picture. The time when the focus is on the conversation, i.e., an active form of interaction, is marked by the meeting of the attention zones (explained hereafter) of each participant. The representation is therefore indicative, but do not relate to the quality of the interaction [interaction]. Values and context are absent of this representation. Compared to the previous ones, the involvement of the 5 senses and of the expected engagement of each participant in the ritual is represented. Although it is yet fairly approximate and therefore connotes more the engagement of the participants than denotes it, the connotation goes beyond and indicates what sensorial aspect is dominant at a certain stage of the ritual [engagement].



**Figure 6:** coffee ritual description

The strength of this visualization resides in the tentative description of the expected engagement of the participants, and of the sensorial flows in the ritual. This is a novel proposition compared to the previous two visualizations, as it intends to bring interaction and attention at the center. However, this aspect is not advanced enough yet to be significantly contributing to the design.

### 3.4. Conclusive analysis

Three different visualization approaches have been presented here. Their analysis helped to point out some aspects that appear to be essential for a valuable ritual visualization, i.e., relevant for ritual description and composition. We recapitulate them here, before discussing them in the next section towards the second stage of the present research.

#### 3.4.1. Time

Related to time, the first aspect concerns the nature of rituals as a series of nested events. As events can be sequential, nested, overlapping, recurrent, etc., the visualization tool should provide a visual structure to clearly and accurately the relations. Therefore, we suggest that there is a value in (1) creating multiple levels of details, in order to provide both a comprehensive overview and accurate details by 'deepen the reading' of the ritual, in (2) clarifying main steps of the ritual (e.g., preparation, degustation, tidy up), and in (3) providing visual references (e.g., the shape of the tea egg is a clear maker of the stages of the ritual: start, serving, cleaning, infusing, drinking, ending).

It is also important to characterize the time when the ritual starts and when it finishes, which (4) might differ for the host and for the guests, and (5) might be related to each other (the tidying up of one ritual relates to the starting of the preparation of the next ritual). In this case a visual element should describe the continuity among the various editions of a similar ritual.

#### 3.4.2. Interactions

The interactions subject-artefact and subject-subject are the essence of rituals. They constitute not only the factual qualities of the rituals, but also the affective experience of the participants of it. This should be transcribed by the tool by (6) the description of the facts (possibly by denotative

elements), and (7) by the description of the dynamic qualities in these interactions (possibly by connotative elements).

Moreover, there should be a differentiation between (8) 'imposed actions', i.e., what the participants must do and how, and (9) 'action possibilities', i.e., what participants can do. This aspect is essential to understand the subtlety of designing ritual, and how it may differ from classical interaction design projects, usually focusing solely on action possibilities.

#### 3.4.3. Engagement and values

Last, the various levels and types (active vs passive) of engagement also render the experience of the participants at different time of the ritual. Therefore, visualising the levels and the types of engagements might (10) support the analysis of the ritual by characterising participants' involvement, and (11) contribute to the composition of the rituals as a means for discussion and interpretation of the expected involvements of the participants throughout the ritual.

## 4. DISCUSSION

The 12 points listed in the previous section are proposed main aspects to be taken into consideration for the creation of the targeted visualization tool (1 step of the current research). To progress further in this research and to create a validated visualization tool for rituals, used for describing and composing rituals, we can now proceed to the second stage with the consideration of the aforementioned 11 points.

The main expected challenges are as follow: (1) to ensure the value of the propositions resulting for the analysis in this portfolio, (2) to validate the consistency of these propositions as elements of one tool, (3) to point out the potential contribution of such tool for the designing of everyday rituals. These are the next three criteria to be assessed in the following of this research.

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