

# **RePlay: Creativity in Action and the Philosophical and Cognitive Underpinnings of Improvisational Theatre in the Design of Tangible Interfaces as an Embodied, Aware and Reflective Design Practice**

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**Abstract:** *RePlay* is an exploratory environment being developed by one of the authors to observe a concept named *Creativity in Action*. Via *RePlay* the authors explore themes important to creative process for example reflection, flow, improvisational creativity, enactive perception and bodily externalizations. As a participant the value of *RePlay* is as an embodied approach for observing as well as enhancing reflection and understanding how bodily externalization is an important component of design process especially in the design of tangibles where in which the body is an important parameter.

**Keywords:** Creativity in Action, Embodiment, Reflection, Awareness Training, Theatrical Improvisation, and Externalization

## **1 Introduction and Motivation**

This paper is trans-disciplinary in nature and proposes to create a bridge between related concepts from the disciplines of theory of mind, Impro theatre, design process, cognition and human computer interaction. It introduces a framework being developed by one of the authors called *RePlay* that is used as a creativity research tool and as part of design process [1][2]. *RePlay* is an environment for training reflection as part of the creative design process utilizing Impro games developed by the author that are based on improvisational theatre techniques. *RePlay* was developed in order to conduct creativity research in the realm of design thinking as well as to assist design teams to incorporate bodily perception as part of design process, in particular in the design of tangible interfaces. Hiroshi Ishi describes "Tangible User Interfaces" (TUIs) as augmenting the physical world by coupling digital information to everyday physical objects and environments [3] Some of the benefits of practicing *RePlay* are increased awareness, physical externalization, improvisational creativity, divergent and associative thinking, reflection, awareness, as well as flow and group mind amongst teams. Below is a figure of some of the main elements of the framework.



**Fig. 1.** Diagram of RePlay

As an environment, *RePlay* encourages design thinking and assists teams to observe and reflect upon what I would like to propose calling *Creativity in Action* [4]. Via developing the RePlay framework it was necessary to introduce a term that describes a type of creativity that is, embodied, reflective, aware, ephemeral, improvised and situated. *Creativity in action* is based upon embodiment and situated action and describes a type of bodily creativity that is both reflective and ephemeral inspired by the writings of Suchman, Ponty, Heidegger, and Husserl [5][6][7][8]. *RePlay* encourages a phenomenological research approach focused on the individual experiences of each participant including a third person approach of the facilitator and promotes experiential learning [4][9]. The process of developing RePlay has involved an action based research methodology that is focused on doing theoretical as well as practice led research via workshops and training to be facilitator of the framework. The framework trains designers to become more aware and able to take advantage of reflection as part of informing how a product or service might be designed.

## 2 The Role of Creativity Frameworks

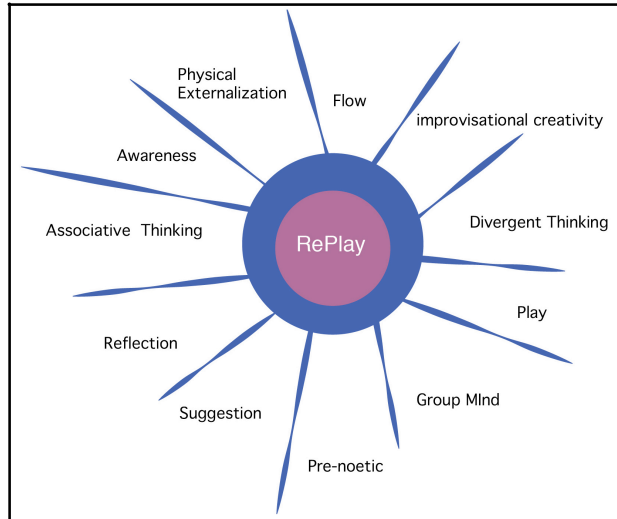
Commonly creativity methods or tools are used to assist the creative process. Unlike a tool or a method a framework is process oriented and provides an approach, and rather than being prescriptive, it encourages a reframing of the problem space. For example Eva Hornecker's framework named *tangible interaction* explores embodiment and its relationship to the design of tangible interfaces. Inspired by the work of other tangible interface researchers such as Hiroshi Ishi, Hornecker created a frame work called *tangible interaction* which focuses on the materiality, bodily aspects, the physical representation of data, and how a tangibles are embedded or might augment a physical space. The *tangible interaction* framework brings together concepts from architecture, product design, interactive art and human computer interaction. Utilizing the framework Hornecker's research led to the creation of a set of cards to be used as part of a design process called the

*Tangible Interaction Card Game* utilized as part of early brainstorming [10] [11]. While Hornecker's domain is tangible interactions, meaning physical, and embodied phenomena, it is interesting that in producing her tangible design principles as cards, not just text, the actual process is made tangible. In fact, this is also the case in other design domains where some sort of card set is used for inspiration.

## **2.1 RePlay as a Creativity Framework for Reflection**

*RePlay* combines improvisational games with design thinking as well as reflection. This has resulted in new Impro games being developed like *design machine*, *tangible heros*, *design mapping*, and others. As a creativity research framework it also functions to document qualitatively externalization in the design process using video analysis, reflective interviewing as well as surveys focused on reflection upon the experience [1]. In the next section we will explain more what is meant by the term externalization.

Schön's describes three levels of expert knowing: *knowing in action*, *reflection in action*, and *reflection on action* [12]. *RePlay* at its core is a way for developing and exploring these valuable types of knowing as part of a creative process by drawing attention to the body as part of design process and becoming aware of physicality as a way to cognitively consider a design problem space [2] [4]. In summary some characteristics of *RePlay* are that it improves physical externalization, improvisational creativity, divergent creativity, reflection, awareness, flow and group mind amongst players. The *RePlay* framework allows for a highly relevant kind of *experiential learning* about creative process, a concept that is currently lacking in design education. Psychologist, education reformer and philosopher John Dewey believed that experiential learning is a process of making meaning from direct experience and should be a part of the education curriculum [9]. Later in this paper I will give some examples of some Impro games optimized to be used as part of a *RePlay*. Below is a figure 2 which illustrates some of the research themes being addressed by the framework.



**Fig. 2.** Research Themes in RePlay

### 2.3 RePlay and Enactive Perception

Enactive perception, a term coined by philosopher Alva Noë purports that perception is not just something, which occurs in the mind but is intrinsically connected to action [13]. This echoes the perceptual psychologist Gibson, who's concept of ecological perception emphasizes the way that perceptions are tuned for us to be acting creatures, seeing exception as intrinsically linked to actions without any intermediary internal representation in the standard cognitive sense [14]. In an interview theory of mind philosopher Noë stated that from a phenomenological perspective (and referring back to Aristotle's *'Poetics'* 2500 years earlier) a theatre performance is an excellent way to understand an experience as both audience and actor in that it contains a beginning middle and an end. At the risk of seeming too literal in my interpretation, Noë could not be more correct in terms of theatre being an effective approach for understanding an experience in relation to creative process [15].

During a *RePlay* one of the goals is to understand from a phenomenological approach the role of the body in creative process. If Noë is correct regarding the role of action in perception perhaps by training one's awareness and ability to reflect as part of design process one could enliven the design process. If much of our perception is linked directly to action and as Schon suggests expert understanding is also expressed as 'knowing in action', then the best way to reveal our own and others understanding of the world is not by direct questioning or purely mental reflection, but by reflection on those observable actions. When one uses the body as a tool for understanding then the body itself offers up a kind of back talk. In the area of tangible computing where context, gesture and environment play an important role,

what better way for designers to get a better understanding than for them to use their bodies as a way understand a design problem space. This type of physical action could be interpreted in the most literal of ways in terms of understanding the gestures or actions of a mundane activity such as making breakfast or even more abstract activities in terms of using the body to physically understand something like a data flow diagrams or perhaps a tangible product like the *design machine* exercise done in a *RePlay*.

A real life example of how we might use action in order to understand a design problem via theatrical/design thinking is the example of the household furniture shop IKEA where customers are corralled through various backdrops of different spaces in the home; living rooms, bathrooms, bedrooms etcetera all so that they might be able to physically experience what it means to be in these spaces. If it were enough to just mentally visualize a space like this, then IKEA would not need to go to such lengths in order to sell its products. However IKEA's experiential business model is highly successful in that this activity works through customer's role playing and experiencing these different spaces. This activity allows customers to perceive better imagine how IKEA products might be useful for them according to their unique needs.

### 1.3 Creativity in Action and the Role of Reflection and Training Awareness

I have introduced Noë's ideas of perceiving the world via using enactive perception yet terminology fails in terms of describing ways in which one might use enactive perception within creative process. This where the term *creativity in action* becomes helpful to train creativity in action in a way that can be applied to design process by observing and training designers to become more aware of *knowing in action*, *reflection in action*, and *reflection on action* [12].

Firstly, through practicing a *RePlay* and eventually by being able to transfer these strategies to their general design process. As a result when done optimally *creativity in action* can lead to states of *flow* which is perhaps a kind on focused *knowing in action*. *Flow* as defined by prominent creativity researcher Csikszentmihályi is a type of focused motivation that is characterized by single-minded immersion. It is characterized by the harnessing of emotions in the service of performing and learning. When someone is in a state of flow emotions are not just contained and channeled, but positively energized in a way that is aligned with the task at hand [16]. This also seems to be characteristic of good Impro. *Flow* in this case is similar to how an athlete might describe being in the zone. In the case of a *RePlay* this might then transcend into group mind amongst the players involved in or facilitating a *RePlay*. Part of the reason this occurs is because *RePlay* utilizes improvisational strategies that tap into a more pre-noetic aspect of consciousness that is then made physical before there is the opportunity for evaluation normally, something which can occur quite early in the design process. Dix et al. explains that embodiment theory suggests that what we think consciously is not under conscious control; it is pre-noetic a term proposed by Gallagher [17]. Dix et al. refer to Libet's

experiments and state that the conscious mind gets a chance to 'veto' unconscious action; hence it has been argued we don't have 'free will', but do have 'free won't' [18]. However, this is still at a very low-level of consciousness. In fact, there can be quite complex thought in even quite simple processes. Dix suggests that in the emotion of regret one makes a complex counter-factual assessment of what *would have* happened if one had acted differently and how likely this would have been to lead to a different result. That the process of constructing that thought also connects to a set of emotions which then drives a type of subconscious learning [19].

While sharing some characteristics the flow states during *creativity in action* are not so much about learning but about instead realizing the opportunity of choice in terms of action. In the case of regret one might have wished they made other choices. What happens in the case of *RePlay* is that through training awareness and attention one is then able to choose from particular reactions to a thought and a resulting action. For example in an Impro this reflection in action must always be present due to the re-occurrence of “breakdown” a term used by Heidegger to describe the restructuring of a perceived interpretation [7]. Impro theatre embraces breakdown due to the fact that one of its characteristics is that there is no script and all activity is based around being open to what the scene has to offer moment to moment. Keith Johnstone an expert improviser refers to this type of heideggerien breakdown as “interrupting routines” being when an actor purposefully breaks with the action of the scene. He suggests that the deliberate act of doing this sometimes gives value in a scene [20].

In *RePlay* this process of ‘interrupting routines occurs’ all the time where by the object being discussed or the context might suddenly change also amongst non-expert players. This act of interruption offers the opportunity for shared understanding and creative exchange amongst the players [Ibid]. Garkinkel's 'breaching experiments' fulfill a similar role in certain kinds of ethnographic research [21].

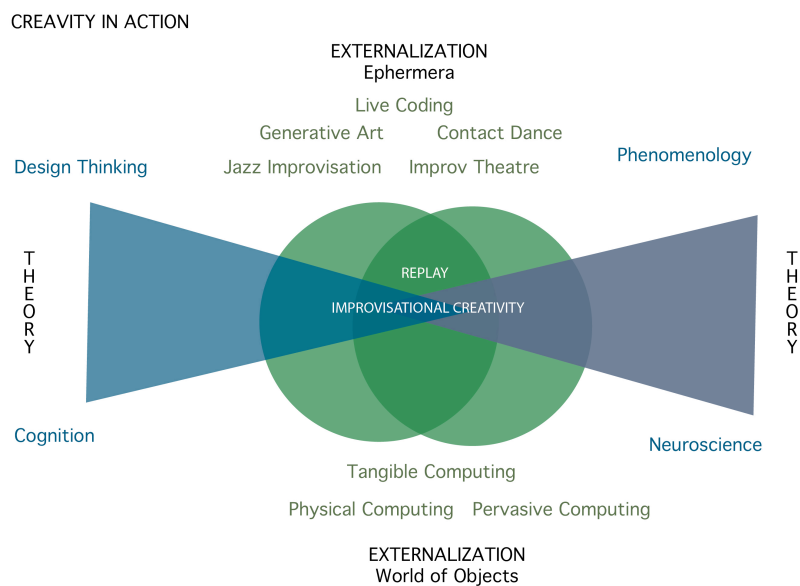
I would like to suggest by that by doing *RePlay* designers may perceive an experience differently for example even a mundane task like making breakfast and that via doing *RePlay* become aware about the types of choices they make during this activity. This type of ephemeral awareness via *creativity in action* can then applied to design of tangible objects or services. Given what we know about enactive perception and the pre-noetic we could hypothesize that much of what we do gets physicalized before there is even conscious awareness. Therefore if during a *RePlay* participants are able externalize via creativity in action this could make this activity useful strategy for learning about the embodied knowledge of a person or a group.

In a recent neurological experiment done by Max Planck Institute for Biological Cybernetic in Germany scientists have discovered that attention and awareness might indeed be two separate activities which previously have been considered to be interwoven. Meaning that one could have attention to a task but not necessarily the awareness of themselves doing the task. For example one might be playing tennis

but nor actually be aware each time you lift the tennis racquet.

The scientists managed this by experiments with participants in a two-by-two factorial design: The visual target "visible" versus "invisible" and attention "to" versus "away" from the target. Cleverly designed composite images shown at high frequency intervals to one eye allowed a target presented in the same or the other eye to be either visible or invisible, respectively, whether or not the subject directed their attention to it. "It was important not to depend on the participant to report the visibility of the target," explains Masataka Watanabe, since the task of reporting would itself direct attention towards the target... Paying attention to the target almost doubled the BOLD activity in the visual cortex, while sheer visibility of the target had almost no effect. "Here the BOLD signal is not modulated by awareness... [22]

In summary neuroscientists have discovered that simply having awareness of the target did not translate into higher activity in the visual cortex thus making a strong case for the need to train awareness as part of experiential learning having attention while doing a task does not necessarily imply awareness [Ibid].



**Fig. 3.** Creativity in Action

As illustrated in the figure 3 above other activities that demonstrate creativity in action are contact dance, technologically mediated dance, live coding, Impro theatre and some other forms of performance art. In the case of Impro theatre there are certain creative constraints that optimize it for studying creativity in action especially amongst groups. For example one of the characteristics of a standard

Impro is a lack of props and stage set. The actors are all meant to create objects and locations through miming or establishing a location therefore having to rely heavily on physical externalizations. In some cases the audience may provide this yet the actor usually creates as setting based on a mental or embodied understanding that is then shared and developed amongst the players. Since most Impro is done with two or more players this is also dependant on the participation of the other players as well. As an audience member watching a professional Impro you might have the impression of spontaneous activity without evaluation of suggestions within a scene. On one hand this is indeed the case however, what is also the case, especially amongst very experienced improvisers, is that it is possible to become aware of certain qualities of a scene and then be able act upon them accordingly. For example one such concept is *game of the scene* in which the actor establishes what is the theme of the scene or the tension between the players. This is a type of *knowing in action* and as has been described by Schon over time, can be trained. For example the *game of the scene* could be a characteristic such as forgetfulness that both characters then try to play off of. An un-experienced improviser may simply ignore this while an experienced improviser recognizes this. In order to be able to become aware of the *game of the scene* within an Impro the actor needs to be able to be extremely reflective as well as capable of creativity in action. Therefore the player might utilize Schon's concept of *knowing in action* in order to perform *creativity in action* by providing suggestions via vocalizations or bodily engagement with their partner or the location. This characteristic involves awareness in that the players needs to be open to not only what is happening in the scene but also what is being offered by the space real/imagined as well as the other player(s) in the scene.

Note however that, due to time constraints and the fact that Impro is not scripted, the whole activity is *ephemeral*. In most cases once a performance is completed it is over and no trace has been produced and as sometimes the case that the actors were so deeply involved in the scene that they themselves may not remember what has occurred. That is, any potential for Schon's *reflection on action*, that is post hoc awareness and analysis of the processes and methods, depends on the actors' memories. To address this *RePlay* video tapes Impro sessions in order to create a *trace* or record, which is then available for post hoc reflection.

## 2 Embodiment

So far I have discussed the role of perception in terms of enactive perception and how this then relates to the concept of creativity in action [14]. I appreciate this will be a rather cursory summary for a theory as complex as embodiment which would normally require much more depth in order to even begin understanding this topic. Yet for the purposes of this research project the main literature that has been explored is the work of Heidegger's *Being in Time* as well as Merleau Ponty's *Phenomenology and Perception*. This also includes contemporary theory of mind philosophers Francisco Varela, Andy Clark and Shaun Gallagher [23] [24] [17].



According to Ponty the body has its own way of perceiving the world that is separate from that of how the mind constructs relationships in the world. According to Ponty the body is part and parcel of the environment [6] Andy Clark describes this in a different way with the term *extended mind* and suggests that mind extends beyond the body [24]. Similarly as already mentioned Noë believes that we understand the world through our sensorimotor activities and that without action there isn't a possibility for perception.

Perhaps the act of group mind amongst players during an improvised *RePlay* is an expression of how several bodies and minds (no Cartesian pun intended) can become part of one action and hence collectively involved in perceiving. In Steven Mithin's "The Singing Neanderthals" [25], he suggests that early music making was critical in forging a sense of group identity. In particular, along with a particular species of frog (sic), humans are one of the few creatures capable of *synchronised rhythm* (such as clapping, dancing or singing in time together), and that the purpose of this is to induce 'boundary loss', a sense of being one with others. This is exploited in *RePlay* by using the game *design machine* whereby players improvise to collectively create an object or data flow diagram. Unlike a traditional Impro design thinking strategies are incorporated into a *RePlay* and players are facilitated to use their bodies as way to conceptualize a product or service. This type of problem solving encourages players to physically solve a creative problem rather than just using more readily used forms of externalization such as conversation or sketching. Via a *RePlay* rather than using *epistemic tools* such as software or hardware, designers are re-engineering design process by factoring in the body into their understanding of interactions with the world and as part of a design context [26]. Instead of the pencil or the use of Photoshop software the body becomes the tool through which they gain an awareness for the context, user, or environment they might be working with as well as their choices for solving the problem space. As designers we need to get back to the basics of interaction in terms of understanding our relationship with the world. One way of doing this is by understanding more about externalization as well as the internal processes of creativity in action.

### 3 Externalization and RePlay

Dix and Gongora describe externalization as something that involves embodiment, representation and exploration of our own thoughts, feelings and interior life [27]. The term externalization itself reflects a philosophical and practical tension: it suggests both embodied interactions with external artifacts, but also the processes of making internal representations external. In art and design this reflects dual views of creativity as internal muse or embodied engagement [Ibid].

When observing *RePlay* one witnesses the unfolding of this type of unconscious prenoetic activity before it can be evaluated (we are conscious of it, but not how it

comes to be), similar to Libet's work as discussed earlier [19]. Two expert improvisers describe this process in an Impro as ...

Here's an interesting exercise. Be still and become aware of a thought. Try to catch your thought at the moment of its inception. When does the thought actually begin? Once it's verbalized in your brain, the thought is already old. It is a narrative thought which is a commentary on the thought or experience that has already occurred and thus is not a present thought. There is a moment when the thought actually arises that is pre-conscious and pre-verbal where the Source exists. If you can get quiet enough and focused enough, you can find it. More and more, as you still the narrative thoughts bouncing around in your head (a.k.a. "being in your head"), you are able to be present and concentrate on what *is*. When you can move beyond the narrative thought to the original thought, you have moved into the present moment and then, you're cookin'.

When you meditate regularly, you start to move into that place where thoughts begin. That is the place you need to access on stage. It's the place where you're not stressing, creating/doing, and putting forth effort, but are being bathed in the music of the Universe. You stop working and are free to just *be* and truly *discover*. One of the first things you discover is that the original thought does not come from you or from any effort you put out [28].

Other examples of externalization as already mentioned in the previous section might be a conversation, a sketch, a prototype, notes a mood board, bodily movement and so on. All of these activities are done consciously or unconsciously to support a creative process. Sometimes this might be consciously recognized as an externalization and in other cases might not be consciously acknowledged by the practitioner(s).

Unlike a regular Impro, a *RePlay* is a much more process oriented approach whereby the facilitator assists the players through reflective prompts which enforce reflection on what is happening as much as how the environment and how their bodies as an externalization can support the exploration of the design problem space by focusing on creative process, reflection and improvisational creativity. Unlike a regular Impro a *RePlay* is an unscripted activity that incorporates some of the constraints present in Impro theatre such as *Production Blocking*, *Game of Scene* and other techniques. In developing *RePlay* a great deal of attention has been given to certain games that focus attention more on environment and physicality such as object work. This is not to say however that *RePlay* could not be used for other aims such as team building, trust work, participatory design and skills training as well as an informational externalization for communicating complex concepts or services to a client.

## 4 Examples of Impro Guidelines Application to Design Process

### 4.1 Production Blocking

In improvisation *production blocking* happens when the participants do not support the suggestions by the other players. A simple exercise called *yes and* encourages players to support each other's suggestions and expand the scene further. Players do not necessarily need to agree as long as they are continuing to move the scene forward keeping in mind what the other player has offered. When applied to a design process this can have a similar intention to that in brainstorming process where the goal is not to discourage others from expressing their ideas.

### 4.2 Game of the Scene

The *game of the scene* happens when players identify attributes of that scene that then enable to story to unfold this can be in the form of character attributes of conflicts within their interaction. *Game of scene* in a way provides certain constraints that can then frame the action or how the players relate to each other. When one discovers the *game of the scene* the idea is to endow the other player or understand more about them without necessarily solving the conflict. In a design process one can utilize game of the scene to explore the constraints or requirements of a product or service. One can also use game of the scene to understand more about the user or what might be key factors in the design of a product or service. Sometimes the facilitator calls out *game of the scene* in order to encourage the team to focus and accept what has been offered.

### 4.3. Endowment

Endowment is process by which one of the players offers up a suggestion or characteristics to the other player. This could for example be a name, their age, their mood or their activity. What endowment allows for is a perceptual shift or a conceptual reframing of the action. This could be very useful when exploring particular features of a tangible interface or the kinds of users that might take an interest in this product or service. The way this is translated in Impro is by the use of *the offer* which suggests concepts to the other participant.

## 5 Examples of Impro Guidelines Application to Design Process

The usual format of a *RePlay* is to establish where the stage might be and to draw participant's awareness to their situation and to their physicality. The way this is done is first through a series of games depending on what the workshop will be about. Recently as part of the Tiree Tech Wave Gongora conducted a *RePlay*. The Tech Wave is a workshop/retreat for academics, designers, media artists and computer scientists regarding technology. In this case this workshop was about the tangible objects so a great deal of the exercises for warming up had to do with scenario building and getting the group in sync with each other.

During the first *RePlay* session participants had brought tangibles with them such as a portable touch surface interface, digital light a tangible prototyping tool called pin and play as well as several other DIY tinker objects. She then photographed each participant with their objects and asked them to describe these objects in a few words. Later she printed up the photographs and used them as inspiration for a *RePlay*.



**Fig. 4.** *Trigger Objects* Tیره Tech Wave (2011)

Gongora then conducted a series of games focused on bringing together attention and awareness such as the clapping game and the pointing game. In the clapping game players stand in a circle and direct a clap at one another. The goal is to get everyone focused and making eye contact with each other. In the case of a *RePlay* although the bodies of the players might be in the room their minds may be elsewhere. Similarly the pointing game gets players to get in contact with the space by pointing out objects and naming them.

The second part of this exercise created by John Cremer involves pointing yet naming the previously mentally registered object [29]. This again focuses attention further by forcing players to hold a previous thought while pointing at a new object. This task in a way challenges the task of action perception by forcing players to articulate something different than what is being perceived and working with their short term memory. The second half of the workshop involved having players conduct short three line scenes. After having warmed up and done some basic Impro scenes the *RePlay* activities were then introduced. In the first session exercises were geared around object work and that meant focusing on possible use cases and scenarios for the tangible objects they had brought. I have named this activity working with *trigger objects* where by the object work is inspiration for activities in a *RePlay*. The players then conducted various scenes which incorporated games like *Scene Swap* yet each game was focused on encouraging designerly ways of thinking and training creativity in action via prompts and facilitation on behalf of the

facilitator. In the second workshop similar warm up exercises were conducted however the focus was much more on abstract aspects of *RePlay* such as encouraging bodily awareness as part of perception. The players then performed an exercise called *design mapping* whereby they did a walk through of a creative process applying certain physical attributes and movements to depict activities they felt embodied tasks that they did at certain moments in their creative process. I utilized Graham Wallas model of creativity of *preparation, incubation, verification, and illumination*, as a springboard for this activity [30]. I then had the players create tableaus of each creative phase and I asked them about their relationship to that activity as well as what was what the activity they were miming to match this. I later had them utilize these movements to create kinds of *design machines* that represented these different activities. As a result the players became more aware of their creative process and where and why they might struggle with a particular aspect.

Utilizing *design machines* as an inspiration for the next exercise one of the players volunteered a design problem he was working through. His design problem involved creating an electronic publishing system. Using *RePlay* I asked him to work with his partners to and to narrate what would be a data flow diagram of his electronic publishing system. This resulted in a swirling and dazzling movement-based approach to a process that is normally very technical and hard to follow. The result was that players although not all from a similar technical background understood better their role as part of an electronic publishing system as well as the system itself. There were loads of questions about the kinds of data, the flow of information and who the users of this system would be since the players wanted to understand better their function in the data model and their role. Some of the lessons learned were a greater awareness of own design process and activities as well as better understanding of how different conceptual ideas come together.

## **6. Discussion**

Through developing and utilizing *RePlay* teams become more effective at being present in their design process. Bodily externalization as a tool extends our cognition and trains our ability to conduct *creativity in action* since it brings ideation out into the wild before evaluation is able to occur. Unlike sketches or prototypes that are often made alone and later explained to other members *RePlay* is developed collaboratively and works with shared mental models. As a creativity framework *RePlay* offers a valuable way of understanding flow and the role of suggestion in the creative process. The possibilities for developing the *RePlay* framework as a tool for design process but also participatory design, team building and other types of innovation process are endless. Yet what makes *RePlay* unique within this research project is its focus upon a design problem space as well as reflection and training awareness.

## **7. Conclusions**

We have introduced the *RePlay* framework and its value for training creativity in action as well as creativity research framework for studying design process. Enactive Perception seems to play an important role in *Creativity in Action* yet

awareness and attention may not necessarily be the same thing yet via using *RePlay* awareness may be better facilitated as part of design process. There is no doubt that embodiment plays a role in perception and awareness and reflection are ways of drawing attention to this in design process by training knowing in *action*, *reflection in action*, and *reflection on action* via using *RePlay* games like *design machine* as part of design process.

## 8. Future work

As part of the future work of studying and developing *RePlay* we would like to research more specifically connections between attention and experiences of flow and group mind within a *RePlay* through the use of suggestion. The key to this of course in achieving a better understanding of *creativity in action* as well as fostering reflection and awareness as part of improvisational creativity.

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