

‘FIELD AND AGENT’: Health and characteristic dualities in the co-creative, interactive and musical tangibles in the RHYME project

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This article suggests that co-creation as a meaningful interaction deriving from the interpersonal interaction between interactive and musical tangibles (also called co-creative tangibles, or just CCTs) and a group of users activates certain types of dualities inherent in the CCTs. These dualities are: object/agent; predictable/unpredictable; structured/unstructured; field/agent. The activation of these dualities is vitalizing and can be seen in relation to health. Umberto Eco’s aesthetic ideal of the *open work*, as well as his concept of the *field of possibilities* (Eco, 1989), initially focussed my attention upon these dualities, which I first pursued in my master thesis (Eide, 2013) and to which I will return in what follows. The CCTs in question here were developed for the interdisciplinary research project RHYME (www.rhyme.no), and the data was collected at a special education school. The user group included children with disabilities and adults who work in the school and know the children well (hereafter referred to as ‘close others’). As we will see, co-creation is both a goal and a method in RHYME, and it is therefore of particular interest to RHYME researchers. In this context, I devised the following overall research question: *Can Eco’s concept of a Field of possibilities explain the dualities found in the CCTs developed in the RHYME project, and if so, how does this affect our understanding of co-creation as vitalizing and health promoting?* To engage with this research question, I have used a qualitative research design with structured analysis and five semi-structured interviews with the close others. In addition, I showed video excerpts of the testing during the interview in order to remind them of the testing situation.

First of all, I will introduce the RHYME project and define its core concepts: *health, close others, CCTs, children with disabilities, and co-creation*. I will then present Eco’s related notions of the open work and the field of possibilities (Eco, 1989; Eide, 2013). With the help of a selection of quotations harvested from my master’s thesis, I will explore what kind of dualities the CCTs potentially create. In the concluding discussion, I will suggest that the CCTs possess a two-dimensionality in the

co-creation event.¹ I will also elaborate upon the ways in which this new awareness might influence the field of music therapy.

The RHYME project:²

RHYME is a five-year interdisciplinary research project (2010–2015) financed by the Research Council of Norway through the VERDIKT program. Its aim is to develop Internet-based, tangible interactions and multimedia resources that have a potential for promoting health and life quality. The project specifically addresses the lack of health-promoting interactive and musical information and communications technology (ICT) for families with children with severe disabilities. RHYME explores a new treatment paradigm based on collaborative, tangible, interactive Internet-based musical 'smart things' with multimedia capabilities. Within the project, these interactive and musical tangibles are called 'co-creative tangibles' (CCTs). The goal of RHYME is twofold: (1) to reduce isolation and passivity, and (2) to promote health and well-being. The RHYME research team represents a collaboration among the fields of interaction design, tangible interaction, industrial design, universal design and music and health that involves the Department of Design at the Oslo School of Architecture and Design, the Department of Informatics at the University of Oslo and the Centre for Music and Health at the Norwegian Academy of Music. The project encompasses four empirical studies and three successive and iterative generations of CCTs. The media is developed in collaboration with the Haug School and Resource Centre, the children and the families. Its user-oriented research incorporates the users' influence on the development of the prototypes in the project. The users include from six to ten families who have volunteered to participate, and the children with disabilities in the families range from seven to fifteen years old. The children vary considerably in terms of behavioural style, from very quiet and anxious to cheerful and rather active, but all of them become engaged in enjoyable activities when these activities are well facilitated for them. The most extreme outcomes of the variation in behavioural style relate to disability conditions, and mostly those within the autistic spectrum, which applies to four of the children. These conditions include poor (or absent) verbal language and rigidity of movement. Also, the children's mental ages range from six months to seven years, and their physical handicaps range from being wheelchair dependent to being very mobile. The Norwegian Social Science Data Services approved the RHYME project in February 2011, provided it would gather, secure and store data according to the standards of ethics in Norwegian law.

Defining core concepts

Health

The aim of the RHYME project is to promote health and quality of life for users with disabilities and their families (Stensæth, 2013; Stensæth & Ruud, 2012). Health is

1 All quotations are translated from Norwegian by me.

2 The section inside the frame below is similar in all of the RHYME articles in this anthology, Music, Health, Technology, and Design by Stensæth (Ed.)

here understood from a salutogenetic perspective.³ This perspective emphasizes health as continuum (Bruscia, 1998; Ruud, 2010), which means that health can exist even in the presence of factors that threaten it – it is a subjective, experienced condition, or something you *are* not something you *have* (Bruscia, 1998; Ruud, 2010; Stensæth, 2010). It also means that health is process; it is something you can influence and adapt under given circumstances.

Nordenfelt names this perspective a *social-holistic health strategy* (Nordenfelt in Stensæth, 2010),⁴ which draws attention to the fact that health is not only a medical phenomenon but also a social phenomenon. A healthy person functions well as a *whole*, both mentally and physically:

Being in good health is then about more than surviving and feeling well-ness. It is also about self-actualisation and participating (Stensæth, 2010, p. 109).

This social-holistic perspective on health dovetails well with the circumstances and intended outcomes of the RHYME project, because the children who participate in it experience their health as constantly threatened by their disabilities. Nevertheless, they are obviously able to experience quality of life through self-actualisation and participation, and even more so when the environment and the people surrounding them focus on those factors that promote health. From this perspective, RHYME likewise supports the ideals of Universal Design, which frame 'disability' as simply a mismatch between the particular individual's prerequisites and the function-related requirements that reside in the physical and social surroundings. Thus the disability is not understood as a characteristic of the individual, or as something they are. Instead, it is something he or she *has*, and it can be dealt with in constructive ways, less via individual facilitation than design for all (Skjerdal, in NOU 2005).

Children with disabilities

In the present article, the notion of *children with disabilities* is intended to encompass the children who are participating in the RHYME project. These children are pupils at Haug School and Resource Centre, a special-needs school in the Oslo area of Norway. They represent a heterogeneous group of children, some of whom are

3 Salutogenetics focuses on the factors that promote health, in contrast to a pathogenetic perspective, in which good health is understood to be the absence of disease (Bruscia, 1998).

4 Whereas he names the pathogenetic perspective a biological-statistical health strategy (Stensæth, 2010).

very outgoing and participatory, others of whom are introverted and observant. Their disabilities range from autism-spectrum disorders to multiple disabilities, and their mental age equivalents range from six months to seven years. Some of the participant children are wheelchair dependent (Stensæth, 2013).

‘Close others’

Because of their disabilities, the children participating in the RHYME project are often dependent on the assistance of another person, here known as a *close other*. Horgen (2010) emphasizes that being a close other to a child with a severe disability entails the responsibility of accommodating the child in a way that facilitates to communication, life enrichment and learning.

Because it is only together with the close other that a child can unfold; without the close other, the child cannot do anything (Ibid., p. 9, my translation).

Being a close other also requires being open and receptive to the child’s initiative and expressions. A close other responds to the child in such a way that the child understands that she/he is being understood (Ibid.).

These aspects of the close other, of course, intersect with certain aspects of the phenomena of dialogue. In Norway, for example, the dialogical perspective has become crucial to music therapists in recent decades (among others, see Stensæth, 2010, 2008b; Garred, 2008, 2001; Tønsberg, 2010), emphasising a particular complementarity and closeness in the therapy relationship (Garred, 2008). Meaning is negotiated through dialogue (Stensæth, 2008b), and a profound ethical responsibility is implied here, as effective dialogue demands both receptiveness and a genuine wish to take the perspective of the other. According to Stensæth (2010), this responsibility informs the music therapist’s ability to co-experience meaning *together* with the child. When the music therapist does manage to understand the child and share feelings and experiences *together* with him/her, an active, receptive responsiveness is created (Ibid., p. 120). Tønsberg (2010) also finds that if music therapy is to be dialogical, it is essential that the music therapist *co-experiences* or *and co-creates* together with the child. As we shall see later on, these perspectives are included to describe the concept of co-creation in relation to the dualities in focus.

In sum, the term *close others* refer to the staff members who attended the testing situation – adults who are all open and sensitive to the needs and the expressions of the children they assisted. They are the children’s teachers, milieu

workers or teacher assistants, and they possess the qualities and ethical responsibilities described above.

The Co-Creative Tangibles (CCTs)

In the present study, the CCTs are the tangibles that have been tested within the RHYME project.⁵ They are interactive, ICT⁶-based, musical 'things' that invite play, exploration and co-creation (Holone & Herstad, 2011a, c). The empirical material that supports this article is based on the interviews with some of the close others who participated in the testing of the particular CCTs known as ORFI and WAVE, two first-generation interactive music tangibles that were tested within the RHYME project.

ORFI

ORFI is an interactive installation consisting of twenty tetrahedron-shaped modules, or pillows.⁷ They are made of black textiles with orange 'wings', which give them an origami-like presentation. A light is placed in the middle of the wings. By bending the wings, the user can effect change in the lighting, video and music (Cappelen & Andersson, 2011a, b; Stensæth & Ruud, 2012). The modules come in three different sizes (ranging from thirty to ninety centimetres). There are microphones in two of the modules, and all of them contain a microcomputer and transmitter to permit wireless communication (Ibid.). A genre pillow allows the user to switch among different genres of music. These genres are set up to interact in endless combinations:

Some of the genres use sound files that can be combined, following musical principles for layering and sequential ordering. In other genres the music and the dynamic graphics are based on programming code, making it possible to order content in layers and sequentially, based on how the users interact. Every sound node is designed so that each can be composed together with others, following musical rules (Cappelen & Andersson, 2011c, p. 3).

5 I will refer to these tangibles as 'interactive music tangibles', 'co-creative tangibles' or just 'tangibles'.

6 ICT is shortened for Information and Communication Technology.

7 ORFI already existed as a prototype when the RHYME project started. It was developed by three of the members in Musicalfieldsforever (www.musicalfieldsforever.com), Cappelen, Andersson, and Olofsson, who represent the design team in the RHYME research group. ORFI had been tested prior to the RHYME project, but the research group decided to make this prototype a starting point for experiencing the new target group and for developing the new generations of co-creative tangibles.

The modules thus represent hybrids of furniture, toy and instrument, and they are designed to invite the users to arrive at different interpretations and develop individual interactions (Cappelen & Andersson, 2011b). The designers also describe the following:

You can sit on it as if it were a chair or play on it as if it were an instrument. Or you can talk, sing and play with it, as if it were a friend and a musician in a communicative way, whereby ORFI answers vary musically after a time (Cappelen & Andersson 2011c, p. 3).

According to its creators, the ORFI installation is meant to create a field of interaction with no primary point of entry. One can interact with it from nearby or further away. ORFI should, in short, promote interaction and communication on equal bases among different users in different situations (Cappelen & Andersson, 2011a).

The users gave a lot of feedback after testing the installation. One suggestion was that the sound should appear to be closer to the interaction area. Another was that it should have more sensory experiences, possibly involving vibration. This feedback led to the development of the second generation of tangibles, called WAVE.

WAVE

WAVE consists of two different interactive tangibles: WAVE Carpet and WAVE Orange. In the following, I will focus on the former, which is presented as a seven-armed carpet. In comparison to the many tangibles involved in ORFI, the WAVE Carpet represents *one* tangible with many inputs and outputs, including infrared responses in a bubble-shaped field, a microphone in one arm, a camera in another arm, and a projector in a third arm. In addition, there are both bend sensors and accelerometers, and there are lights in four of the arms, which are also programmed with sound. In the middle of the carpet, there is a sound vibration element and speakers. The WAVE Carpet differs significantly from ORFI and therefore affords other interpretations and types of relations.⁸

⁸ See Cappelen & Andersson (2014) or elsewhere in this volume for the design process of the co-creative tangibles.

Co-creation

A simple definition of *co-creation* is creating something together. The *something* and the process of *creating together* merit further comment, however.

Creating 'something third'

According to Cappelen and Andersson (2012, 2011a, b, c, d, 2008, 2003; Stensæth, 2013), play and collaboration, along with listening, exploration and composing, are important factors in co-creation. Yet co-creation involves something more. It means "collaboration where the users *create something third* together" (Cappelen & Andersson, 2011c, p. 1). Whereas play is described as a random and spontaneous activity shared between people, collaboration happens when people act towards a common goal and co-creation is additionally understood to be an extended, socially motivated experience of collaboration (Ibid.). It also results in the creation of 'something third'. But what might that mean?

When exploring the concept of *co-creation*, Stensæth (2013) describes the *third* as something that exists on its own terms. She also refers to Trondalen's (2004) exploration of *thirdness* in music-therapy improvisation, where it is linked to intersubjective *moments of meeting*. *Creating something third*, then, might involve an intersubjective meeting that changes our experience of the given relationship. Take Stensæth's perspective a step further in relation to the RHYME project, this sort of meeting might also have the potential of changing our experience of *ourselves* in relation to the community of which we are a part. The community itself is then experienced as an active and vital collaboration party, which influences the people interacting with it and the way they interact with each other.

Stensæth also discusses Benjamin's use of the term *co-created third*:

The co-created third has the transitional quality of being both invented and discovered. To the question of 'Who created this?' the paradoxical answer is 'Both and neither' (Benjamin in Stensæth 2013, no paging).

The third's duality as both invented and discovered, and this shared experience of having invented or discovered something that cannot be traced back to a specific idea, initiative or action, is a good explication of the dynamic process that is characteristic of *co-creation*.

Musicking

Cappelen and Andersson (2011a) also link co-creation to *musicking*, as described by the musicologist Christopher Small (1998):

To music is to take part, in any capacity, in a musical performance, whether by performing, by listening, by rehearsing or practicing, by providing material for performance (what is called composing), or by dancing (Ibid, p. 9).

By making *music* into a verb, Small redefines it, moving away from music as an individual enterprise with the work in the position of privilege and toward music as an act with a social dimension. In this sense, *musicking* includes not only the music in itself but also the musicians and everyone involved as agents in a musical realisation of some sort.

In addition to the social dimension discussed by Small, music therapist Even Ruud (2010, p. 11) links *musicking* to vitality, agency, empowerment, social capital, meaning and coherence in life. Ruud this way applies resource oriented and humanistic dimensions to *musicking*. As we shall see in the following, these dimensions also relate to the health aspects in co-creation.

Health aspects in co-creation

As mentioned, the aim of the RHYME project is to promote health and quality of life for users with disabilities and their families (Stensæth, 2013; Stensæth & Ruud, 2012). This health dimension is further emphasised through the combination of intersubjectivity and the processes of co-creation and musicking, as summarised by Stensæth (2013, p. 24):

We have learned that co-creation implies health musicking. Health musicking incorporates the families' desire *to do* (action) *something* (activities) *meaningful* (intentional) *together* (intersubjective and interpersonal). The aim is of an ecological kind; it is the process of continuously promoting health and at the same time preventing poor health. Accessing these goals implies also strengthening of agency and mastery, as well as creating embodied, sensory, and empowering interactions both with the tangibles and with other people.

Based on the perspectives I have presented here, I might (re)define co-creation as *meaningful interaction deriving from the interpersonal interaction of the users and the CCTs* (see diagram 1). Together, these three agents (the bubbles in diagram 1) invent or discover *something third*.

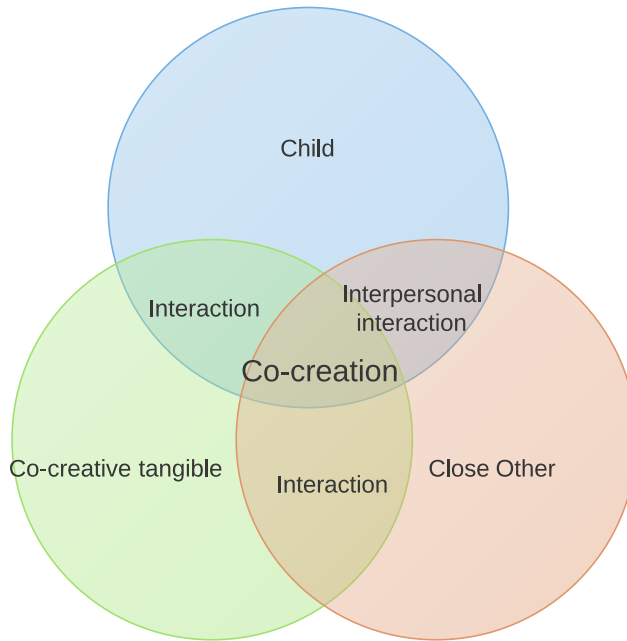


Diagram 1: *Co-creation.*

Eco's aesthetic ideal

In developing the co-creative tangibles in RHYME, the designers of the project, Cappelen & Andersson (2011a, b, c, d, 2008, 2003), stated that they were inspired by Umberto Eco (1989) and his aesthetic ideal of *openness*, as it is presented via the *open work*. Eco's thinking also inspired my exploration of the potential of the CCTs in relation to children with disabilities, and from a wider perspective, to music therapy. I will discuss his notions of *openness* and the *field of possibilities* in what follows.

The open work

In *The Poetics of the Open Work*, Eco (1989) focuses upon works within music, literature and theatre that allow for several possible interpretations from the reader, performer or listener. He considers them to be open because there is no *one* 'right' way to interpret and present them. He quotes Pousseur, who claims that the open work...

... tends to encourage 'acts of conscious freedom' on the part of the performer and place him at the focal point of a network of limitless inter-relations, among which he chooses to set up his own form without being influenced by an external *necessity* which definitively prescribes the organization of the work in hand (Eco, 1989, p. 4).

Eco also identifies a subcategory within the category of *open works*:

However, it is clear that a composition such as *Scambi* poses a completely new problem. It invites us to identify inside the category of 'open' works a further, more restricted classification of works which can be defined as 'works in movement' because they characteristically consist of unplanned or physically incomplete structural units (Eco, 1989, p. 12).

What, then, is an open work, according to Eco? An open work, in the sense of *a work in movement*, is characterised by an invitation from the artist to the receiver to make the work together (Eco, 1989) – that is, to *co-create*.

In addition, we must remember that Eco does *not* associate this openness exclusively with either chaos or coincidence:

They will always be seen as 'works' and not just as a conglomeration of random components ready to emerge from the chaos in which they previously stood and permitted to assume any form whatsoever (Eco, 1989, p. 20).

In other words, if the composer creates an open work, all of its subsequent interpretations and performances will, from this perspective, be the product of the composer as well (Eco, 1989). The programming code that lies in the CCTs could also be understood in this perspective. The interactive characteristics that come alive in co-creation, including the music, is not coincidental but a result of the designer teams' work.

A field of possibilities

The RHYME designer team was also inspired by the aesthetic ideal of Eco's take on the *field of possibilities*. In what follows, I will link this notion with the RHYME CCTs, the principles and dictates of universal design (Skjerdal, 2005; Lid, 2012) and a holistic health strategy (Stensæth, 2012; Ruud, 2010).

Two of the designers of the RHYME tangibles, Cappelen and Andersson, think of the CCTs as representing a field of possibilities, noting the various interactions implied by the technologies related to image, sound and light and their potential impacts upon the relations that occur among persons, roles and positions (Cappelen & Andersson, 2011b, 2008, 2003).⁹ Many possibilities, then, can be realised through the users' interaction with the CCTs, particularly in the course of time (Ibid.).

It was Posseur who first suggested the concept of a field of possibilities, but Eco (1989) looked more closely at the terms *field* and *possibilities* from a historical and social/philosophical perspective. The former, Eco notes, is the opposite of a linear cause-and-effect model:

[...] a complex interplay of motive forces is envisaged, a configuration of possible events, a complete dynamism of structure (Eco, 1989, p. 14).

The field, then, represents a configuration of *possible* events or simultaneous structures. Along those lines, the notion of possibilities specifically rejects the claimed unity of intellectual authority in favour of personal choices in real social contexts.

Cappelen & Andersson (2003) allowed the notion of the field to change how they thought about the relationship between user and designer in the interaction design. In particular, the user is invited to become a *co-creator*:

The *Field* concept changes our understanding of what we create because it makes us focus on other qualities in our designs, like circulatable, inscribable and multivalent. If these are qualities that we want to achieve in our designs and works of art, then this changes our creative process – how we acknowledge our users and our own contribution. The users become co-creators and our contribution is maybe only an expression in an ongoing discussion, instead of being a finalised artwork (Cappelen & Andersson, 2003, p. 88).

⁹ The designers refer specifically to spatial, temporal and actorial relations; see Cappelen & Andersson (2011d) and Stensæth (2013).

Eco's field of possibilities, then, is more than just a philosophy and/or a design concept – it is a metaphor for the CCTs in relation to universal design (Skjerdal in NOU 2005; Lid, 2012) and a holistic health strategy (Stensæth, 2012; Ruud, 2010). By this I mean that as a metaphor a *field of possibilities* illustrates how the CCTs create an open field that invites anyone to participate in society and in active co-creation, regardless of physical, social or mental function. Further, by being experienced as a *field of possibilities* by the users, the co-creation with the CCTs can be understood within a holistic health strategy that emphasizes health as a subjective experience, independent of factors that threaten the health state of the co-creators.

Four dualities

Based on my master thesis (Eide, 2013), I will now present four dualities that further derive from and elaborate upon the *open work* and *field of possibilities* aspects of the RHYME project's CCTs. Quotations from the close-other interviews will illuminate how these dualities arose during the act of co-creation that occurred among the close others, the children and the tangibles. Interestingly, it became clear from the interview analysis that some of the experiences of the CCTs were contradictory in nature, and when I sought to accommodate rather than undermine this fact, new depths of possibility emerged, which I have captured in these dualities.

Object and agent

On one hand, the interviewees describe the CCTs as objects with certain characteristics and functions (light, sound, camera, projector, fabric and so on). On the other hand, perhaps because of their pointedly interactive qualities, they also described them as agents – their interactivity, then, more than simply functional, was also *animating*. The CCTs were almost described as 'beings' with their own intentionality:

She acted towards the octopus (...) and probably believed that it was the octopus which made those...

That it was kind of alive?

Yes, I do think so...

Further on in the interview, the same interviewee said that she thought the child experienced the CCTs as having 'human characteristics':

So she did see, or have the experience, that it [the tangible] gave something back.

As an object, then, the CCT can be manipulated (by touching, pushing, bending). At the same time, it is an agent and an 'intelligent' responder in the co-creation. By this I mean that the CCT responds in its own way and takes its own initiatives without being manipulated. This duality makes users curious and holds their attention over time, even with children with disabilities who are described as not very curious in the first place.

Predictable and unpredictable

This predictable/unpredictable duality emerges from the object/agent duality, because the CCTs' objectness is relatively predictable, and its agentness emerges directly from its ability to be unpredictable. The CCTs surprise the user with each new interaction because they (are programmed to) 'make up' their own answers rather than simply respond in a certain way or imitate. On one hand, there are limited ways to manipulate them:

You learn that some inputs have this sound, and others have that sound, and then you just have to learn where the different sounds are located (...) then you just move them.

On the other hand, the user does not really know how they are going to respond:

You never know what will happen when you give them a push.

Structured and unstructured

Predictability, in turn, relates to structure. For some of the children participating in the RHYME project, structure (and a sense of an overview) in everyday situations allows them to feel like they are in control of their lives. It gives them a sense of self-agency (Eide, 2013). Given that the RHYME experiments occurred in a rather 'unstructured' fashion – the CCTs were initially unfamiliar and sometimes reacted unpredictably – it is especially compelling that even these children generally

responded to them in a positive and composed way. Was it the case, then, that the children experienced a sense of structure regardless? Did they see the CCTs as at once structured and unstructured, or at the very least capable of aspects of both qualities? The 'unstructured' would then relate to the unpredictable in the CCTs, which is a result of the programming and that what makes the CCTs improvise and behave 'intelligently'. The children learned and also accepted that the CCTs' responses were unpredictable and that there was no way to control the tangibles as such. The 'structured', however, would relate to the constants of the CCTs – that is, their physical characteristics, such as shape or functions. I find that one of the interviewees refers to the constants as structured when she refers to the pillows as a 'theme' and the functions of the buttons as controllable:

In a sense, it was the pillows that were the theme.

All the buttons had functions (...) and it gave a certain feeling of control when you first had tested out all of them.

By acting as both structured *and* unstructured, and predictable *and* unpredictable, the CCTs allow for acts of co-creation that appear to abide by unique laws and encompass the aforementioned dualities. Because there is no intersubjective element as such in the CCTs, they do not apply to what music therapist Holck (2004) labels *interaction themes*.¹⁰ Yet users *can* experience CCT-enabled co-creation as developing interaction themes, in the sense that certain predictable responses give rise to expectations. When the CCTs break with these expectations, however, they do not confuse or frustrate the users but instead surprise, amuse and engage them.

Field and agent

The field/agent duality, like the first, contrasts what the CCTs provide against what they *do*. It represents the physical environment in which the interaction takes place, and it participates in the interaction. This is an explicit part of the design: the CCTs a meant to be a hybrid of furniture, toy and instrument, in the interests of multiplying the possibilities inherent within (and *with*) it (Cappelen & Andersson, 2011b).

¹⁰ At the same time, one could argue that as long as there are several co-creators, there will be the potential for intersubjectivity in the co-creation process with the tangibles.

Discussion

I have now suggested four dualities as characteristic for the co-creative tangibles. We might then wonder: Do these dualities have implications for the way we understand co-creation itself? I would now like to explore the relationship between these observed dualities in the CCTs and the process of co-creation, which we defined earlier.

Active and passive

Revisiting the aforementioned dualities as characteristics of the CCTs, we see further that the CCTs play both a *passive* and an *active* role in the co-creation. First of all, as discussed, the CCTs are passive, in that they are *objects* that can be manipulated in several *predictable* ways so as to *structure* the interaction. Likewise, they create a *field* or physical environment that sets the scene for the interaction. Yet as *agents* that respond *unpredictably*, the tangibles are also active. This is a result of their *unstructured elements* (see before). Users are thus invited to interact meaningfully from both a passive and an active position, which expands the possibilities for co-creation and, in turn, for health promotion.

'Two-dimensional' role

As both passive and active, the CCTs fill a decidedly two-dimensional role. As opposed to a musical instrument, for example, which is only passive – as an *object*, the musical instrument require manipulation in order to produce the music that can then become part of its interaction with the user. Equally one-dimensional, the close other can only be an *agent* – as a human being, he/she can be manipulated to a certain degree, but never as an object.

From a dialogical perspective, the interaction between the music therapist, the client and the music is often graphically represented as a triangle, whereby each person or element mediates between the two others (Garred, 2008, 2001; Stensæth, 2010). Given the inherent dualities of the CCTs, we find that we must significantly extend such a diagram to encompass this kind of co-creation, in light of its *openness* as a work and the *field of possibilities* cultivated by the RHYME design group (Diagram 2):

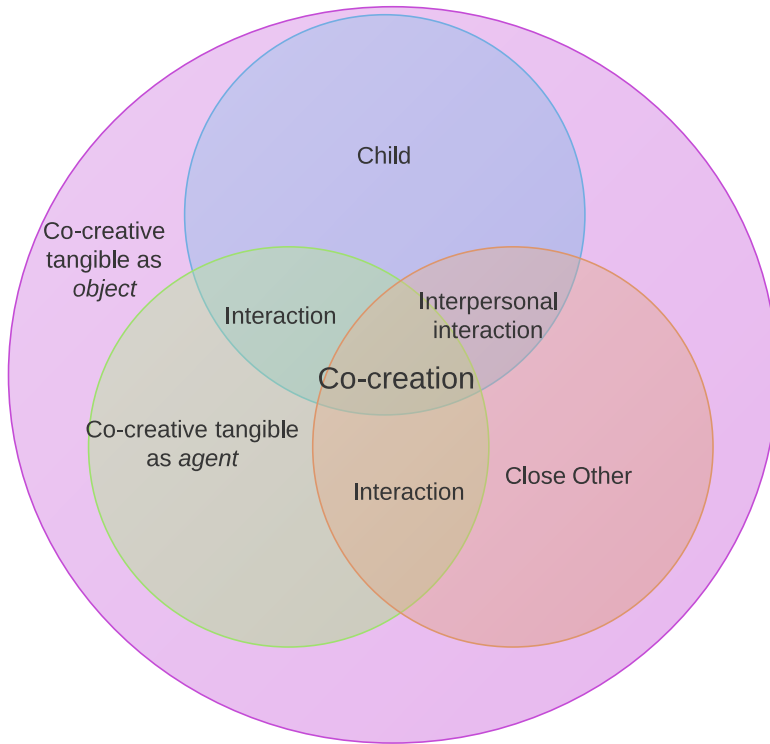


Diagram 2: *The field of co-creation.*

In this diagram, I have tried to illustrate the two-dimensional position of the CCTs, so we see that ‘the co-creative tangible as *object*’ (purple) surrounds the ‘child’, the ‘close other’ and the ‘co-creative tangible as *agent*’, supplying a generous field for interaction and co-creation. Additionally, the ‘co-creative tangible as *agent*’ (green) overlaps with both ‘child’ and ‘close other’ to create more specific fields for interaction and co-creation.¹¹

One interesting implication of the two-dimensional position of the CCTs in co-creation is that the close other and the child can have an interpersonal interaction without interpreting and experiencing the tangible as an agent. However, because of the position of the CCT as an object/field, the CCT will still play an important

¹¹ This recalls Stensæth’s (2013) illustration of the health-musicking perspective upon co-creation as located in a field between the child with disabilities, the close other and the CCTs.

part in the interaction. In the same way, I would argue that the child could have a meaningful interaction with a CCT as an agent, independent from the close other. The child is therefore presented with a field of several possible relations (as according to Cappelen & Andersson, 2011b, c), which returns us to Eco (1989) and his exploration of the terms *field* and *possibilities*.

Co-creative tangibles and music therapy

So far, I have concentrated on the relevance of co-creation in the context of RHYME. I will now extend these insights to my work as a music therapist with clients.¹² Rather than any particular expectation from music in relation to the therapist-client interaction, might we see music therapy as a configuration of *possible* events or interacting forces of structure. Also, rather than music *as* therapy or music *in* therapy (see Bruscia, 1998), we could frame music as *one of many possible media* in music therapy and place the client instead 'at the focal point of a network of limitless interrelations' (Eco, 1989, p. 4) with the therapist and the musical work that could ultimately act to promote health. This allows for the experience of *the third* (see before), which anticipates that the community co-creates and interrelates too. Also, by expanding the possibilities for who and what is active in the co-creation, we add new perspectives to music therapy. In fact, I believe that the perspectives revealed by the ways the CCTs vitalize the children and strengthen their feeling of mastery, becomes another way to reinforce the empowerment- and resource-oriented thinking that already informs music therapy (Ruud, 2010). RHYME shows that there could be many ways in which a client can be health promoted through music therapy. To interact with media like the CCTs creates challenges for the therapist too, because with increased possibilities of tools in therapy, comes increased risks for failing too. An active and responsive attitude must at all times be shared through co-experiencing and producing meaning (Stensæth, 2010). From this perspective, music therapy as a *field* of possibilities could represent a therapeutic ideal, which suggests many possible ways to deal with a therapeutic problem.

Secondly, given the inherent rejection of authority that resides in the field of *possibilities*, music therapy can no longer be considered a *systematic process of intervention* (Bruscia, 1998), because it is less the therapist than the interaction (and the CCTs or the music as an agent) that produces meaning and client insight. However, I would argue that the benefits outweigh the risks and potential costs in this regard.

¹² Music therapy is here understood as a 'systematic process of intervention wherein the therapist helps the client to promote health, using music experiences and the relationships that develop through them as dynamic forces of change' (Bruscia, 1998, p.20).

Conclusion

In this text, I looked at how Eco's concept of a field of possibilities might shed light upon the dualities found in the CCTs developed for the RHYME project. I have also described how my exploration of the dualities could affect our understanding of the crucial concept of co-creation. By identifying four possible dualities in the CCTs and discussed their relevance to co-creation and Eco's thinking, I found that the dualities both express the open ideal *and* are created as a result of the open ideal that inspired the design of the CCTs.

By putting the dualities mentioned earlier into play in the CCTs, the designers realize Eco's concepts of *openness* and a *field of possibilities* in the co-creation. This understanding correlates with the way the users describe their experiences of the CCTs, which is as objects embedded with 'inherent dualities'. Also, as the users learn how the CCTs respond uniquely to their co-creation with them, they develop new ways of relating to each other and the CCTs. The RHYME designers have in this sense managed to facilitate the building of new relationships between (musical and interactive) things and people, which I think has the potential to change the way the users see themselves in relation to themselves, to one another and to the community of which they are a part (e.g. Stensæth, 2010). Such an experience could be health promoting too, whether it happens outside or inside a music therapy setting. Eventually, I will refer to one of the interviewees who responded like this when I asked her if she thought that the CCTs could promote health:

I think so. I think they are so easy to manipulate. (...) This builds confidence. You are someone who makes things happen. You are someone who creates. Togetherness, in a way. And it brings joy – yes, a better quality of life.

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