From Representation to Rhizome: Open Design from a Relational Perspective

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ABSTRACT Open design is a new design paradigm that creates a lot of dilemmas for designers to deal with. However, these dilemmas are mostly being discussed from within the design sector itself and from very polarized perspectives which do not provide much depth to create ways to deal with this new paradigm. This paper considers open design as a philosophical position that relates to broader cultural developments and puts the way we deal with design in the perspective from our attitude to identity which can be described as a performance. To create a new thinking space to reconsider openness, the non-representational thought model of the rhizome is applied to examples from Dutch design culture.
which will offer a more thorough understanding of where the true innovative power of open design lies.

KEYWORDS: open design, relational design, rhizome, performance, non-representational theory

Introduction

‘Openness is more than a commercial and cultural issue, it’s a matter of survival’. Thus argues John Thackara in the first big publication on open design in the Netherlands, *Open Design Now* (Thackara, 2011: 44). A matter of survival which throughout history has always been adopted by the Netherlands and has famously given birth to things like the praised and reviled political so-called ‘polder model’, the continuous battles with water and wind though which power and wealth were both lost and gained, and of course the role of the country as a trading hub in which it has always been exposed to a true flood of foreign influences. In his notorious book on the nature of Dutch design, *False Flat: Why Dutch Design Is So Good* (2004), Aaron Betsky notes that the Netherlands is not just a culture of pragmatic openness but a country whose very physical existence relies on a constant and thorough reworking of its surroundings. God created the earth, but the Dutch created the Netherlands, according to a foreign saying about Holland.

The Dutch are designers, but what design is, is no longer that easily defined. A brief look at the nominees for the Rotterdam Design Prize 2011 shows a broad and confusing spectrum. What is design when there are not as many concrete products nominated as well as design projects on public space, or a daily newspaper? When the lack of concrete products seems to be replaced by an emphasis on context? And if a baker is nominated, can everybody be a designer? It calls very much into question what design is nowadays. How should it be defined? What is the role of design in contemporary society? And who can be called a designer? A set of questions which is mostly put on edge by the last nominee: open design (in the form of Waag Society for their research on this subject). And because open design is not only in the experimental stage or being played out by minor players in the design field, but also being adopted by one of the most famous names of Dutch Design, Droog Design, it thus can be said that open design slowly but surely roots itself in Dutch design culture.

Thackara’s statement can be used to paint a striking portrait of the Netherlands, but it also indicates something else: that openness is more than some economic model or way in which a culture deals with its surroundings: it is a state of mind which is vital for dealing with current circumstances. The recent development of open design is therefore more than a new development that is just ‘redesigning
design’, as Tom Hulme calls it, it is a ‘very general philosophical position’ (de Mul, 2011: 37; Hulme, 2011: 222).

Open design is, first of all, a reflective mode. And yes, there is already much discussion about topics like new forms of organization, business models, and varieties of products and services. These discussions, however, are mainly conducted in the design sector itself. Moreover, generally it is a very polarized debate which hovers between the standpoint of idealists who consider open design as a utopia for new opportunities and sceptics who see in open design only a threat to essential design values like authenticity and copyright. Neither perspective does justice or provides sufficient depth to explore the real nature of openness. They are rooted in branches from an old tree: a system of thought that is no longer satisfactory to describe the role design now has in our lives.

To provide a more thorough reflection of open design, I would like to pay attention to the philosophical position of openness and I thus would like to describe open design as a development that has its roots in, and is in interaction with, a broader sociocultural paradigm shift which also reveals a fundamental change in how we experience ourselves, and relate to others and the world. As Matthijs van Dijk, Professor of Industrial Design at TU Delft and scout for the Rotterdam Design Prize, argues: ‘Nowadays, design isn’t about shaping the product, but about shaping society as a whole’ (van Dijk, 2012).

Furthermore, I think open design should be described as a new paradigm of thought, which I would like to call a turn from thinking about design as a representation to design as a rhizome, or a non-representational model of thought. This experimental thought model generates a fresh approach to open design that can prevail falling back in neither the idealistic nor the sceptical perspective. In adopting this experimental approach, this paper in itself can be considered as an open design blueprint for an alternative model of thought. It explores and aims not as much to serve as a closed argument, but as a thought experiment and hopefully also as a meeting with the reader: read it, adapt it, change it, disagree with it and let it resonate with your own ideas and knowledge.

New Design Paradigm: From Form via Content to Context

Open design embodies a paradigm shift in thinking on design, which Dutch design philosopher Henk Oosterling and American design curator Andrew Blauvelt describe as a shift ‘from form, via content to context, or from syntax via semantics to pragmatics’. From: ‘How does it look?’ via ‘What does it mean to me?’ to ‘How does it work between us?’ (Oosterling, 2010: 119).

Both Oosterling and Blauvelt distinguish three phases in the brief history of modern design. The first phase, born in the early twentieth century, was ‘a search for a language of form, a visual syntax that
could be learned and thus disseminated rationally and potentially universally’ (Blauvelt, 2008). Designers gave directions on how to make things that were good for the masses, and the belief was that the masses needed to be educated. Blauvelt humorously states that this phase is characterized by ‘a lot of “isms” like Suprematism, Futurism, Constructivism or de Stijl’. Movements that ‘had a formal design language which was believed to be able to transcend cultural and social differences’ (Blauvelt, 2008).

The second phase both Blauvelt and Oosterling situate between the 1960s and 1990s. In this period, there was an emancipation of the masses. Reindustrialization led to market segmentation, so the masses had more choice in their consumption patterns. As a result, designers started to follow their preferences: design became user-centred. Central in this phase is therefore the focus on design’s ‘meaning-making potential, it’s symbolic value, its semantic dimension and narrative potential’. By linking itself to the visual language of mass media, ‘design became a story’ (Oosterling, 2010: 119). The emphasis was therefore not as much on creating new forms, as on adding content. Design products became a status object, as they contained symbolic capital and did not per se have to be functional anymore. Although the design products created in this period generated much discussion on true meaning, Blauvelt stresses that ‘in the end though, meaning was still a “gift” presented by designers-as-authors to their audiences’ (Blauvelt, 2008). In this phase design is clearly still a top-down process.

Design’s third phase appeared in the mid-1990s and it is here that we have to situate the emergence of open design and an important paradigm shift. Where design was long thought of as a representation – a sign that belongs to a hierarchical and logical order to form semantic constructions and express relations through which it maintained a place in the world and people would interact with it – this image no longer matches the new type of design that emerged in the mid-1990s. Tightly linked to the immense speed of evolving digital technologies which can be spotted in the discourse of digital-inspired terms, it is in this phase that ‘interactivity, as an exchange between designers and users became an issue’ (Oosterling, 2010: 119). Design has not only become user-centred, the user has become the designer. Design here thus transforms into something that is process-oriented, open-ended and ultimately participatory. This new phase is preoccupied with design’s effects – extending beyond the design object and even its connotations and cultural symbolism (Blauvelt, 2008).

This new type of design disrupts the order and hierarchy which first existed. Also, what the design object is in itself is not very clear anymore: it has no fixed identity; it is something which is an ongoing process. Therefore, I would to argue that open design has gone beyond representation and is something non-representational. Non-representational theory attends to both life and thought as
in ‘in process’ and ‘open ended’. The genesis of the term non-representational began in the early to mid-1990s through a series of books and articles written by the human geographer Nigel Thrift, although its philosophical heritage stems back much further to the works of Foucault, Merleau-Ponty and phenomenologists such as Heidegger, and in the perspectives of Deleuze and Guattari, Latour and Serres, and more recently in political science and anthropological discussions of the material dimensions of human life (Cadman, 2009: 1). Instead of studying and representing relationships, non-representational theory focuses upon practices – how human and nonhuman formations are enacted or performed – not simply on what is produced (Thrift, 1997: 142).

The innovations that this new phase in design has brought to the stage situates Blauvelt in design’s ‘performative dimension: its effect on users, its pragmatic and programmatic constraints, its rhetorical impact, and its ability to facilitate social interactions’ (Blauvelt, 2008). It is a change in design paradigm which Blauvelt very strikingly describes as ‘ripples on a pond, from the formal logic of the designed object, to the symbolic or cultural logic of the meanings such forms evoke, and finally to the programmatic logic of both design’s production and the sites of its consumption – the messy reality of its ultimate context’ (Blauvelt, 2008).

**From Consuming Design Objects to a Dasein through Design**

Nowadays, design is no longer the static production, distribution and consumption of an object. Design practice has become a process, or performance as Blauvelt and Oosterling outline it. ‘Performance’ is not a new term; it is one that is well known in the arts. What is new though is that it is increasingly used outside the discourse of the arts. Open design, with its emphasis on the process, open-ended and with an active user can be described as a performance. However, the notion of performance extends further than a change in designing; it also can be used to describe the change in attitude against design. A transformation in thinking about design objects, and the role design has in contemporary society, is also very closely related to the way we think about ourselves. Deyan Sudjic famously argues in his well-known book *The Language of Things* (2009): ‘We live in a time where our relationship with our possessions is undergoing a radical transformation’. There is apparently not only a change in the thinking on design, but also and especially in the attitude of people towards design and the role design has in society.

Transformation and change are keywords in postmodern society. This change is reflected in all aspects of life: work conditions, family structures, living conditions, relationships, social boundaries and identity. Contemporary society is characterized by a weakening of collective regulatory institutions like the church or the family, and, correspondingly, the greater autonomy of the individual against the
Philosopher Rosi Braidotti thus states that ‘unless one likes complexity, one cannot feel at home in the twenty-first century. Transformations, metamorphoses, mutations and processes of change have in fact become familiar in the lives of most contemporary subjects’ (Braidotti, 2002: 1).

Polish sociologist Zygmunt Bauman calls this phenomenon ‘liquid modernity’ (Bauman, 2000). Charles Leadbeater describes this as the difference between vertical and horizontal mobility: ‘Vertical social mobility – measured by income and wealth – has not become markedly easier […] Yet horizontal social mobility – the opportunity for people to adopt different lifestyles according to their interests – has increased a great deal’. Leadbeater thus characterizes postmodern society as ‘more fluid and open than it ever was, while being just as stratified because of the combination of limited vertical and massive horizontal mobility’ (Leadbeater, 2004: 41).

This ‘liquefaction’ of social conditions in postmodern society has enormous influence on the way people construct identity. Since the disappearance through postmodern influences of institutions and ideologies which were dominant in shaping identity, identities can no longer be understood as a given. Identity has thus become something that is a fragmented, flexible structure, without a solid core. These changes have led to a so-called ‘performative turn’: everyday life is increasingly seen as a stage where identity has to be acted out (Schechner, 2002: 32; Taylor, 2003: 3). Identity as such has become something that has to be constructed and the possibilities for such a construction are now in the hands of the individual. Bauman argues that this construction of identity is achieved through consumption: ‘The logic of consumerism is geared to the needs of men and women struggling to construct, preserve and refresh their individuality’ (Bauman, 2000: 23).

Therefore, in a society where we need to be creators of our own identity, we shift from being passive consumers into active users. We actively use design products in creating our identity. Seen from this perspective, the step to so-called prosumers, or pro-ams, as Charles Leadbeater calls them, is small and actually very logical. Pro-ams – innovative, committed and networked amateurs working to professional standard – also create a sense of identity of themselves through consumption, but in a very active way (Leadbeater, 2004: 9). Consumption becomes a ‘knowledge-intensive activity’ because it exists in a society where the options for horizontal mobility are big and consumption is not about economical but cultural capital, to speak in Pierre Bourdieu’s famous terms (Leadbeater, 2004: 42). Through the acquiring of cultural capital in design products one creates an identity, and thus a sense of belonging.

This vision creates a new perspective on our being and our relationship with design products. The German sociologist Norbert Elias therefore suggests that although in Western society we are accustomed to the vision of a self as a closed territory, a homo
c Clausus, that contemporary identity is constructed in relationships with others, whether they are subjects or (design) objects (Lawler, 2008: 7). Henk Oosterling argues: ‘Our dasein has become design’ (Oosterling, 2010, 123). We are not autonomous closed subjects anymore, but we are a being-in-the-world, as Heidegger puts it, from whom this vision of dasein originates. Heidegger created a new terminology to distance himself from the traditional notion of the subject, which images oneself as separate from the world and in doing so creates three categories: Ego, Being and Non-being. In eliminating the third category and merging it with Being, Heidegger changes the existential question ‘who am I?’ to ‘How is my Being in relationship with the world?’

Of course while it is nothing new that the creating of identity is associated with design, the development of open design with the increasing need for changeability in identity construction ensures an interesting shift in how we experience identity. Identity has changed from an internal authentic, transcendental thing to an external product that has to be designed. There is a shift from the ‘intra’ (the inwardness, consciousness and autonomy) to the ‘inter’ or, in Henk Oosterlings words, from ‘esse’ to ‘inter-esse’. In this way, this can be characterized as a shift to the relational.

**Relational Design**

The role of design has changed from product to performance. And for that reason, design has become something that goes beyond the traditional notions of the object or the subject. The fixed identity of a design object has become dismantled to a design process; the fixed identity of the consumer has become fluid too and can therefore also be described as a process. So, if design is not a product or a tool and it is not something which can be clearly linked to a fixed subject anymore, then where can we find design?

Not in an ‘in’ but an ‘in-between’, in the space between individuals. To understand this point one needs to make a move from Western-oriented philosophy and culture to the East. In the West space is considered as a void between subjects and objects, as empty. Eastern societies like Japan have a very different concept of space, or as they call it: Ma. Ma is considered as a dynamic space in which interactions between subjects and objects take shape. To the Japanese, Ma connotes the complex network of relationships between people and objects and so is a ‘continuous flow, alive with interactions’ (de Kerckhove, 1997: 166). The Canadian philosopher Derrick de Kerckhove used the concept of Ma about ten years ago to describe the future of design: ‘Design will quickly progress from an essentially reactive to a gradually more proactive stage. New technologies should become the object of design, rather than being at the source of design. Design will find more rewarding fields in exploring and creating patterns of interfacing than in the production of objects’ (de Kerckhove,
The vision of de Kerckhove, which now has become a reality in open design, outlines the realization that design, both the design process as well as people's attitude towards design, has become relational.

To describe open design as relational recalls similar developments in the art world in the 1990s. *Esthétique Rélationnel* (1997) or, in English, Relational Aesthetics, is the title of a collection essays by French critic and curator Nicolas Bourriaud. In this collection of essays, Bourriaud describes a shift in contemporary art practice as one of relational aesthetics. The term ‘relational’ refers to art that not only situates itself within the ‘inter-human sphere’ but is ‘a formal arrangement that generates relationships between people’ (Bourriaud, 2009[1998]: 19). According to Bourriaud, a new type of art emerged in the 1990s: ‘work that is open-ended, interactive, and resistant to closure, often appearing to be “work-in-process” rather than a completed object’ (Bishop, 2004: 52). It is important here to emphasize that Bourriaud does not think his theory can be applied only to art: he considers it to be a means of locating contemporary practice within culture at large as a direct response to the shift from a goods- to a service-based economy and the virtual relationships of the internet and globalization, which on the one hand have prompted a desire for more physical and face-to-face interactions between people, while on the other have inspired artists to adopt a do-it-yourself (DIY) approach and model their own ‘possible universes’ (Bourriaud, 2009[1998]: 13).

In calling design relational, it should not be conceived as the direct successor of relational art though. However, it should create a new understanding about how recent changes in our attitude against design, as I described in the previous sections, shift the design method in a fundamental way. Design, because of its functional intentions, has always had a relational dimension. There was always a relationship between the design object and its user in the effects it generated. Now, however, this relationality has a totally different implementation. Just as Bourriaud does not regard relational aesthetics to be simply a theory of interactive art, open design is not simply design where interactivity is the central theme. Interaction of the viewer is required to create meaning; meaning has become collaborative. In the words of Claire Bishop: ‘relational art seeks to establish intersubjective encounters (be these literal or potential) in which meaning is elaborated collectively rather than in the privatized space of individual consumption’ (Bishop, 2004: 54). This is a whole new level of reaching out to your audience, or users in the case of design. Blauvelt thus states in his manifesto for relational design that it is moving away from the idealized concept of use toward the complex reality of behaviour: ‘Relational design aims for usability, but not in the sense of some predescribed functionality (the modernistic form follows function) nor a functionality as symbolised in consumer rituals in product semantics. Rather, design has moved to the realm
of actual behaviour, misuse and unintended consequences – form follows failure’ (Blauvelt, 2009: 60).

From Blauvelt’s statement it can be deduced that not only the relationship with the audience undergoes a real transformation in a relational approach to art or design, the nature of the relationship is also very different from the idealized linear, logical and predictable version through which designing as representation happened. As Blauvelt states: ‘what is different about this phase of design is the primary role that has been given to areas that once seemed beyond the purview of design’s form and content equation’ (Blauvelt, 2008). A unifying principle of relational aesthetics is that they are open-ended – negotiating relationships with their audience in a way that is not prepared beforehand: ‘what makes this relational is that it is the actual event that curates the work, not the other way around’ (Davies and Parrinder, 2006). We have moved from the ‘command-control vision of the engineer to the if-then approach of the programmer’ (Blauvelt, 2008).

**Rhizomatic Design Practice**

Relational design is obsessed with processes and systems to generate designs, which do not follow the same linear, cybernetic logic of yesteryear (Blauvelt, 2008). Portuguese design researcher Manual Lima states in his book and ongoing research project *Visual Complexity* that the relationships in contemporary society are completely different from those in earlier times. He argues that we have moved from ‘problems of simplicity’ in the seventeenth to nineteenth centuries, via ‘problems of disorganized complexity’ in the twentieth century, to ‘problems of organized complexity’ in the twenty-first century, with which he wants to submit that all things in contemporary (visual) culture are interconnected and interdependent (Lima, 2011).

This interconnectedness and interdependence fundamentally differs from the representational model of thought, which is often represented by a tree. Tree models are hierarchical, linear and dichotomizing. Each element of a tree has one clear function and place in a specific order, which leaves no possibilities for cross-connections. The tree is thus predicated upon principles of identity, resemblance, analogy and opposition. The French philosopher Gilles Deleuze and psychoanalyst Félix Guattari break in their philosophical work rigorously with this tree model. They regard the dichotomizing tree model as inadequate, because it is not open for possible changes: ‘We’re tired of trees [...] We should stop believing in trees, roots, and radicals. They’ve made us suffer too much’ (Deleuze and Guattari 2004[1980]: 15). They suggest a new model of thought that in their vision better captures the practices of life, philosophy and art: the rhizome.

Rhizome is a biological term used to describe an acentric root system like couch grass. Deleuze and Guattari use this concept to
describe a non-representational way of thinking. A rhizome is a system, or anti-system, without a centre or any central organizing motif in which the individual nodal points are connected to one another in a non-hierarchical manner. A rhizome thus fosters transversal connections and communications between heterogeneous points (O’Sullivan, 2006: 13). The rhizomatic model is therefore a way to view things differently because not only is its approach bottom-up instead of top-down, but more importantly: it moves away from thinking in one fixed identity, to something which is constantly in becoming. As Nigel Thrift states: ‘This a theory based on movement in its many forms’ (Thrift, 2008: 16).

Understanding the practice of open design rhizomatically reveals questions and solutions to dilemmas which are heavily debated upon in the discussions on open design, like authenticity and copyright. Characteristics of the rhizome can serve not only to describe the practices of open design more clearly but also to shed a new light on these discussions, which I will illustrate with examples from the Dutch open design scene. To understand the practice of a rhizome, I must however stress that it is important not to consider a rhizome as a metaphor but as a tool to create escape routes from our fixed ways of thinking (O’Sullivan, 2006: 28).

The first characteristic of a rhizome is connectivity, often grouped together with heterogeneity. Deleuze and Guattari define this as: ‘any point of a rhizome can be connected to anything and must be […] A rhizome ceaselessly establishes connections between semiotic chains, organizations of power and circumstances’ (Deleuze and Guattari, 2004[1980]: 7). What is important here is that the rhizome not only implies a contact, or interdependence, but also a ‘movement between different milieus and registers, between areas that are usually thought of as distinct and discrete’ (O’Sullivan, 2006: 17). Where design objects usually are a collaboration between designer, manufacturers, producers and consumers, all parties with very different backgrounds, values and interests, the new element in open design is that these parties are moving from the backstage to the spotlight. The connections are suddenly out in the open. See, for example, the new Design for Download project (2011; see Figure 1), a collaboration by Droog Design and Waag Society, which will be made available through the online platform MakeMe where consumers can see a product online, use software to choose materials, customize the design to suit their requirements, download the blueprint and make the product at home and thus co-create the product (Klaassen and Troxler, 2011: 130). MakeMe links the designer directly to the consumer and the consumer directly to the manufacturer, rather than through a middleman or organization, which assumes a new level of visibility to each other.

This direct connection not only disrupts the usual hierarchical order in the designer-consumer chain, but also creates a sort of tension. The consumer is no longer coerced into fulfilling the designer’s
interactive requirements, but has his own independent thought. This tension is, for example, played out in the often-heard remarks about quality control in discussions on open design. The fear is an overload of bad design ideas. As Renny Ramakers, cofounder of Droog, argues in an interview for Open Design Now: ‘When I look at the products showcased on sites like Ponoko and Shapeways, I am concerned that the result will be a huge volume of unattractive and clunky design’ (Klaassen and Troxler, 2011: 133).

A rhizomatic perspective can show a new perspective on the tension that is caused by this heterogeneous connectivity. Where heterogeneity is often argued to lead to quality loss, the rhizome considers this the other end of the relationship or connection that is often overlooked: the relationship with the outside. A rhizomatic design practice might then be best understood ‘as the production and utilisation of alternative or “counter” networks “outside” those of the dominant. Perhaps not all connections of a rhizome will be as equally relevant, or as strategically useful, but it is inevitable and necessary that they get the chance to be made, because it can help develop the rhizome, or design, to another level or in another movement. The connectivity that is leading in open design will not produce harmonious communities, but a constant discussion on what (good) design is and should be. In MakeMe, the solution for this problem is sought in creating a curated sphere next to an open sphere. Also, the different shops are free to create their own business models on it and the consumers too can choose their level of openness. When different levels of openness coexist, open design practice can become reflexive and a true laboratory for innovation.
Furthermore, it is important to point out that the discussion and interaction with the consumer does not go simply straightforward. Experimentation and discussion might lead to results, but sometimes you will encounter unexpected roadblocks. In her interview about the decisions that lead to the development of MakeMe, Renny Ramakers provides us with a vivid example of this:

One of the projects was ‘do scratch’ by Martí Guixé, a lamp covered in black paint. People were supposed to scrape patterns in the paint to create their own drawing. This lamp has been sitting around in the shop for seven, eight years, and nobody has ever bought one. People are too scared to add their own contribution to a lamp they bought for about 100 euro’s. Even when we added sample drawings that people could copy onto the lamp themselves, nobody would buy it. We only started selling the lamp when we had artists do the drawings. After that experience, we decided not to continue this product. This type of interactive design did not seem to work. (Klaassen and Troxler, 2011: 134)

These unexpected roadblocks can be put in a new light through another characteristic of a rhizome: the principle of a-signifying rupture. Here also the connection to the outside is very important. A rhizome is constantly in movement and is therefore always searching for new so-called ‘lines of flight’ through which it can escape any dominant form or (over)coding signifying process. To link back to design: the design process needs to be absolutely open to adapt to these a-signifying ruptures. There needs to be a context of continuous feedback and dialogue. A non-hierarchical, interdependent structure means that the designer really needs to stand next to the consumers and be available during the course of the process to jump in for new implications. This requires a new understanding of the role of the designer. The new strategic position of the designer is that of a non-strategic continual awareness. Designing has become something which is never finished nor can it be done from a distance and has therefore to become ultimately dynamic and reflexive.

Waag Society has written a manifesto about this continuous feedback loop that is necessary in open design, called User as Designer, which involves three steps. First, you need to ‘question the question’ which is meant to find out what a user really wants by looking further than his first response, analysing his real behaviour, and viewing the matter from all sides before you come up with a question. The question is key for really connecting. The second step is co-creating. This is about designing the solution to your question with some target members to develop a tangible prototype which can be tested. The third step is then testing of the prototype in the real world. Important here are short feedback loops to better connect to the real working of the design product (Kresin and Stikker, 2011).
Such an approach to design practice means an important shift from designing real or possible (theories about your target group) outcomes, to a design practice that is based on the so-called concepts of actual-virtual. Deleuze describes virtuality as something that is as real as the actual events: it parallels with the actual as a realm of possibilities which are simultaneously present. To adopt an open design practice means adopting this realm of possibilities as constantly being there and possibly changing the course of the designing process instead of a systematic exclusion of the possibilities through the traditional funnel model of research. By focusing on the actual consumer – who shapes his identity through design and thus is not a fixed subject anymore, it is possible to unlock the ‘potential becomings encapsulated within every movement’ (O’Sullivan, 2006: 340).

Blauvelt thus argues for embracing the constraints which arise in the design process:

Once shunned or reluctantly tolerated, constraints – financial, aesthetic, social, or otherwise– are frequently embraced not as limits to personal expression or professional freedom, but rather as opportunities to guide the development of designs; arbitrary variables in the equation that can alter the course of a design’s development. Seen as a good thing, such restrictions inject outside influence into an otherwise idealized process and, for some, a certain element of unpredictability and even randomness alters the course of events. This is not to suggest that design is not always already constrained by numerous factors beyond its control, but rather that such encumbrances can be viewed productively as affordances. (Blauvelt, 2008)

It is here that the ‘in-between’ nature of design practice again becomes important. Design is always situated between the actual and the virtual. Design practice then has to involve an openness to this ‘nebulous realm of potentialities’ (O’Sullivan, 2006: 30).

Open design thus can not only be considered as a shift from the closed design object to designing as a process, but it in my opinion can be taken even further: design has become a multiplicity. Multiplicity, which is the third characteristic of a rhizome, is described as following: ‘It is only when the multiple is effectively created as a substantive, “multiplicity” that is ceases to have any relation to the One as subject or object, natural or spiritual reality, image and world […] A multiplicity has neither subject nor object, only determinations, magnitudes, and dimensions’ (Deleuze and Guattari, 2004[1980]: 8). A multiplicity must be understood without reference to an organizing or classifying referent and has no end, nor beginning or original point.

Considering design as co-creation and multiplicity with a constantly present realm of possibilities sets several traditional ideas surrounding design practice in motion. As it turns out, we link creation to
authenticity and originality and this obviously creates a real paradox with open design. Authenticity originally refers to a mixture of originality, genuineness and individuality. The word authenticity comes from the Greek word *authentikos*, which means ‘firsthand’, or ‘first cause’ (Dohmen, 2008: 162). This precisely outlines the problem: authenticity assumes a particular idea about creating that is about a genius with a Eureka moment. ‘The West has taken the modern artist as the incarnation of the creating God: unique, original and authentic’ (Oosterling, 2011). Open design as a design practice that is inherently multiple, challenges this idea. If you look at products from the *(Un)limited Design Contest,* who is truly the owner of the idea or product? The person who sent it in? But didn’t that person get his idea from a mixture of other people and products? And what if somebody else takes the original blueprint, adapts it and in doing so takes the idea to the next level? The notion of ownership here becomes quite ambiguous. Once a product is released, it is no longer the designer’s. Hence, a funny quote of Henk Oosterling: ‘Every product is a dating website’ (Oosterling, 2011). Authenticity therefore seems to be a ‘holy grail: always sought, never to be found’ (Smelik, 2011: 83).

When we link creation to authenticity and originality, our minds still tend to drift back to 1935, the time when Walter Benjamin wrote his essay *The Work of Art in the Age of Mechanical Reproduction* (1936), in which he discusses a shift in perception through the development of film and photography in the twentieth century. Benjamin writes of the loss of the aura, which he connects to concepts like authenticity and originality, through the mechanical reproduction of art itself. Put simply: only an original work has an aura, a copy has not. Even though copying is widely used in culture, it is still seen as the opposite of culture. The title of the symposium which Premseala, Dutch Platform for Design and Fashion, organized is characteristic: *Copy/Culture* (2011). Copying is perceived as something negative, something non-creative and copyright still firmly reigns, with its verdict: ‘copy is wrong’.

In the rhizome, Deleuze and Guattari propose a very different vision of the copy. Through the characteristic of ‘decalcomania’ they suggest that a copy is actually very productive and even necessary for growth. They describe this as ‘repetition with difference’. We thus need a different vision about creation, as Steven Johnson argues. He states that there is no such thing as an original idea, there is only a network full of inspirations and ideas which can be transformed into something new: creation requires influence (Johnson, 2011). The original conceptualization of authenticity is dismantled: the aura of a design product that first was carried out through the brand, designer or design product in itself, changes now into an aura in the more commonly known sense, as a field that surrounds us.

When design practice has changed into something that is heterogeneously connected, a multiplicity which needs to constantly
copy itself to create growth, the danger is that consumers may come up with designs that are dysfunctional, unmanufacturable or beyond their means. Hence, design companies need not only to provide choices for co-creating but methods by which consumers can make intelligent choices. One can solve this problem by creating a design practice made up of rules. However, this is not very efficient: hundreds or thousands of rules will be required to produce a decent set of viable designs. Rules are good when the context is simple. Open design, as a relational field of (almost) limitless possibilities, is too complicated. Furthermore, the question arises of how open rule-oriented design is. Here, the last element of the rhizome comes into play: cartography. What is different about a rhizome is that it is a ‘map, not a tracing’: ‘What distinguishes the map from the tracing is that it is entirely orientated towards an experimentation in contact with real’ (Deleuze, 2004[1980]: 12). O’Sullivan thus states: ‘It does not trace something that came before (again no representation) rather it actively creates the terrain it maps – setting out the coordination points for worlds-in-progress’ (O’Sullivan, 2006: 35). Terms that come into the picture here are parametric or conditional design. These are design practices which are based on limit setting instead of rule setting. The Conditional Design Collective of Studio Moniker or multiple winner of the (Un)limited Design Contest, Studio Ludens (see Figures 2 and 3), show you should create a space, a walled garden so to speak, in which the consumer can walk freely. You give the user a certain realm of freedom that is going to give them a certain realm of possible outcomes. Great diversity, while ensuring a reduction in complexity, is key here. Such an approach will allow companies to open up their manufacturing capabilities giving consumers the greatest possible choice, allowing them to

**Figure 2**
The Vitruvian Paint Machine for *Take on Me* exhibition in the Van Abbemuseum, Eindhoven (2009) created by Studio Moniker is an open mural painting design based on rules on the proportions of the human body and developed in interaction with the visitors. Credits: Conditional Design by Studio Moniker.

**Figure 3**
The Vitruvian Paint Machine for *Take on Me* exhibition in the Van Abbemuseum, Eindhoven (2009) created by Studio Moniker is an open mural painting design based on rules on the proportions of the human body and developed in interaction with the visitors. Credits: Conditional Design by Studio Moniker.
design/configure products according to their own individual requirements and thus creating designs that are viable and desirable. Open design thus is not only about connectivity, but also about limits, anti-connectivity and disruption.

Conclusion
By taking the discussion on open design out of the design field into the cultural philosophical discourse and describing it as a paradigm shift from representational thinking to a rhizomatic system of thought, I hope to have shed more light on why open design emerges in contemporary society and how to describe, and practice, this new development in design better. Where in contemporary society, openness has become a matter of survival, to refer to my opening quote from John Thackara, a new approach to open design has become a matter of survival too. Openness is now often stuck in either idealism or scepticism, neither of which provides a thorough way of understanding what openness means and where its innovative power truly lies. A realistic perspective on open design is much needed, which also takes in account the tensions, ruptures and non-connectivity that belongs to an open position. Too often openness has been associated with a harmonious connected network, while, as hopefully appears through this article, the image of a rhizome in all its wildness and unpredictability provides more fruitful grounds to extend our understanding of openness.

It is vital to start open design from such a philosophical reflexive position, not to keep a certain openness in the concrete end product at all costs, but to come to more possibilities to deal with this openness which will lead to more options and more creativity. Openness should thus not only be sought in the final product, but rather in the space that is provided in the brainstorm/designing phase to make unexpected things occur. The rhizomatic approach reveals that open design does not have to be flat positivity or run dry on issues like authenticity and copyright. It is about time to throw away the maps of our old thinking models and go on a design adventure: out in the open!

Notes
1. The Rotterdam Design Prize is a biannual prize which aims to show the current state and debates around Dutch design. It is considered one of the most important prizes for design in the Netherlands.
2. The aim of the Design for Download project is to create a platform where design goods take the form of a digital blueprint that the consumer takes to the local manufacturer for customizable on-demand production. Through a worldwide platform for design distribution two pilots will be implemented to test the developed models and designs. During the Salon del Mobile (2011) in Milan, Droog Design presented the first products.
3. The (Un)limited Design Contest, a project of Waag Society and Premse, the Dutch Platform for Design and Fashion, where amateurs and designers in Dutch Fablabs could create their own blueprints or remix existing ones.

**References and Further Reading**


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Biography
Sanne van der Beek is a cultural scientist (MA), currently working as embedded researcher at Virtueel Platform for the Creative Industries Research Program at the Faculty of Humanities, University of Amsterdam. Her work focuses on popular visual culture, with a special interest in design, fashion and new media. She is also a freelance researcher and journalist and writes for several online platforms. You can find samples of her work on www.sannevanderbeek.nl.

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