

# CO-DESIGN: SETTING RELATIONAL DOMAINS FOR DEEP SUSTAINABILITY

Denis Kern Hickel  
[deniskernhickel@gmail.com](mailto:deniskernhickel@gmail.com)

## ABSTRACT

This paper draws mainly on the work of Elizabeth Sanders who has been practising, thinking and mapping participatory design research for over 25 years, connecting it to insights from Maturana (1984), Capra (2002), Jovchelovitch (1995, 2000, 2007) and Preece (2011), to propose that the process of design per se is a relational domain of co-creativity that is essential to construct a way toward deeper sustainability.

**KEY-WORDS:** Co-design, Participation, Public Sphere, Deep sustainability

## 1. Introduction

As an interdisciplinary exploratory field of work, design has been expanding its boundaries and increasingly involving people in what is mainly regarded, studied and developed as user-centred design or participatory design – that are in fact two broad and well established research domains informing design processes (SANDERS, 2008). While the domain of user-centred design research and practice has its origins in the United States and major focus on design usability and utility, participatory design has its origins in north Europe and its practice runs under a mindset that invites people to participate on process as partners (SANDERS, 2006).

Both have been evolving since the 1970's and are now influencing each other, evolving and being characterised as generative design research and co-design by Elizabeth Sanders (SANDERS, 2006, SANDERS and CHAN, 2006). According to Sanders it has been radically changing traditional design processes, creating new collaborative tools, rules and methods for research, expanding design boundaries, creating new relational design spaces, blurring roles and creating new ones (SANDERS, 2005a, SANDERS, 2008, SANDERS, 2009, SANDERS, 2006, SANDERS, 2005b, SANDERS [et al.], 2010, SANDERS and CHAN, 2006, SANDERS and STAPPERS, 2008, SANDERS and WESTERLUND, 2011, SANDERS and WILLIAM, 2003, SANDERS, 2002, SANDERS, 2000).

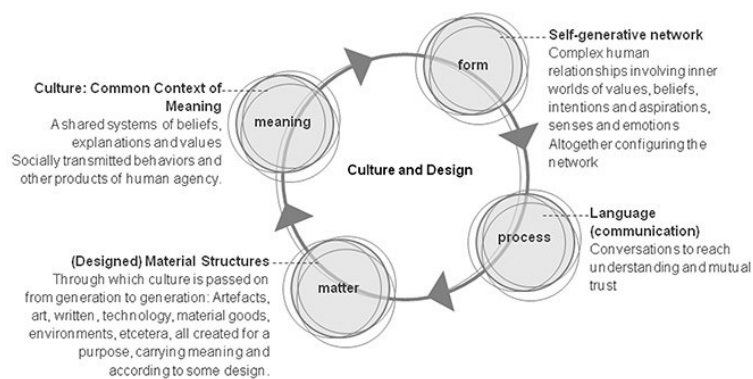
By reviewing the work being developed by Sanders and connecting insights from Maturana (1984), Capra (2002), Jovchelovitch (1995, 2000, 2007) and Preece (2011), this paper aims to support the importance of participatory design to promote relational domains of co-creativity that are essential to build a path toward a culture of deep sustainability (1).

## 2. Introducing a holistic idea of design

When we enter into conversation we find a relational domain within which two or more people participate. It is through conversation that we share and confer meaning to our surroundings, reach understanding and build trust upon which to establish broader contexts of belief, explanations and value systems. It is through our networks of conversation — languaging with others — that we find a certain common context of meaning. Culture is a common context of meaning: a self-generative network of human ecological relationships involving inner worlds of values, beliefs, intentions and aspirations, senses and emotions (CAPRA, 2002, MATURANA, 2002, MATURANA, 1988, MATURANA and VARELA, 1984).

Design is immersed within the networks of human ecological relationships found and made of human corporeal life. Through design we materialise our inner world of values, beliefs and intentions: symbolic and visual communications; material objects, activities and organising services, complex systems and environments for human activities — all created for a purpose according to some design and carrying meaning (Capra, 2002) — See image 1. When we design — the plan or any act of reflection toward the future — we enter into conversations, hence, we find a domain of relationships. For the purpose of this paper, we can also call this co-creative relational space.

The relationship of culture and design is one of circular causality where both are mutually influencing each other. It means that if designers are to keep operating within the same anthropocentric mindset and value-system of industrial and consumer culture we are likely to remain limited on how to make the objects of materialistic culture green(2). On the other hand, to move towards a paradigm of deep sustainability we will necessarily have to discuss how we attribute meaning, our values, intentions and aspirations behind what and how we design. Hence, designers necessarily will have to set up new philosophical frameworks to inform thinking and practice — this paper will not deepen this subject but does support that co-creative relational spaces are the proper domain for such endeavour.



**Figure 1** – Culture and Design, After Fritjof CAPRA (2002) — Culture is a common context of meaning that is a living system: a self-generative network emerging from processes of human communication. Design is inherent to it. Through design we materialise culture. Design processes are human relational domains.

### **3. Moving the Fuzzy Front End**

The increasing participation of people not trained in design along its processes has been accompanied by a movement of its focus and locus of research from the back end, in which people are seen as users of materialised design structures, towards the domains of concepts and ideations that precede traditional design processes, which has been characterising different relational spaces within design practice and research (SANDERS and STAPPERS, 2008).

Initially, design processes were characterised by an expert-driven relational space within which the people we serve through design were seen as consumers, users and/or customers of a given product or service, with processes being focused on the “thing being designed, e.g. the object, communication, space, interface, service, etc. looking for ways to ensure that it meets the needs of the end user” (SANDERS, 2002 p. 01).

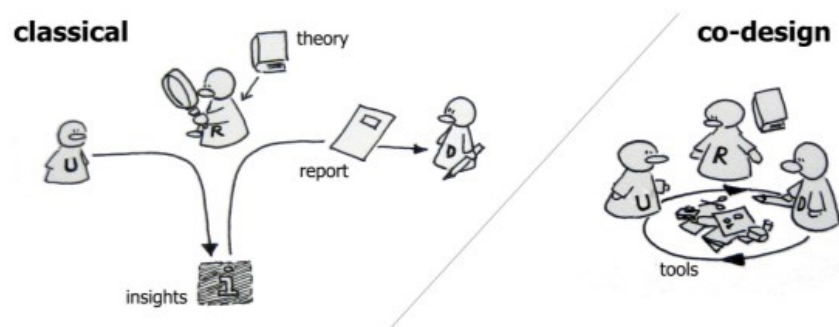
Chasing innovation, companies and professional organisations have shifted from observing and interviewing the passive user’s opinion to bring them through the process establishing new relational spaces for experiencing and adapting and giving them new roles that can range from providing different expertise, informing, inspiring and even in ideating (SANDERS, 2005b, SANDERS and STAPPERS, 2008, SANDERS and WILLIAM, 2003). As it comes closer to early design phases it inaugurates a new and growing co-creative relational space that Sanders situates at what she has termed the “fuzzy front end” of the design development process (Sanders and Stappers, 2008 p. 02).

The front end of the design process is a metadesign domain of aims, dreams, values, beliefs, intentions and aspirations characterised by a range of negotiations that precede the traditional design process. This is a critical phase of the co-creative process that entails understanding people and their contexts, the identification, collection of data and information that will have an influence on the process (CROSS, 2005, SANDERS and STAPPERS, 2008). The FFE tends to connect, or even merge, with conventional design process of conceptualisation and formalisation: with the analysis and synthesis of data with the generation of possible solutions, possibilities being evaluated through cycles of feed-back loop, reassessing and improving information with new ideas along the whole process and which involves brainstorming sessions, conversations, prototype, drawing and several design methods until the final lay-out, detailing and final documentation before execution (CROSS, 2005).

Such a move towards the FFE means that it has been gradually situating its focus and locus on earlier stages, hence extending traditional design process by situating researchers, designers and a range of different people in an anticipatory co-creative design process that tends to dissolve the boundaries and roles of traditional practice. Yet, it can even detach design from product or object materialisation as opening and widening the process for participation and diversity, the process and its multiple possibilities gain importance per se.

Fundamentally, it marks a move from user-centred design to co-design that is indeed changing the roles of the players within the design process. The roles of the user, researcher and designer which were well defined are now becoming more blurred (SANDERS and STAPPERS, 2008). Originally the user was the passive object of study by the researcher; and this would provide the designer with insights, or information to generate new ideas and knowledge. Gradually the user became a critical component of the process and the designer and researcher became closer collaborators. In co-design the roles became of equal importance with all participants co-authoring the process, as explained by Sanders:

“[...] the person who will eventually be served through the design process is given the position of ‘expert of his/her experience’, and plays a large role in knowledge development, idea generation and concept development. In generating insights, the researcher supports the ‘expert of his/her experience’ by providing tools for ideation and expression. The designer and the researcher collaborate on the tools for ideation because design skills are very important in the development of the tools. The designer and researcher may, in fact, be the same person. The designer still plays a critical role in giving form to the ideas” (SANDERS and STAPPERS, 2008 p. 08).



**Figure 2** - Graphic explanation from Sanders and Stappers (2008 p. 08) in which the social scientist was the interface, until the roles of designers and researchers become blurred and the user becomes a critical component of the process (Sanders, 2002 p. 02).

Participatory design research, as explained by Sanders, has evolved twofold. [1] The research made by researchers – people trained in research and/or applied social sciences which has tended to focus on the informational approach drawing on the scientific model of research and relying first on extrapolation of past events as a way to move forward. [2] And the research performed by designers that has tended towards inspirational approach, that is generative, evocative, built through experimentation, ambiguity, surprise. “It draws primarily on the future and the unknown, using imagination as the basic expression” and its “discovering its own tenets of good research such as relevance, generatively and evocativeness” (SANDERS, 2005b p. 08).

Both ways are founding the emerging space of co-creation and configuring generative design research (GDR).

GDR is thus a design relational space emerging from processes of co-creation within the field of participatory research that is essentially design-led. It is fully within a participatory mindset and is characterised by the use of design thinking and generative tools by all the participants since the FFE:

“The name ‘generative tools’ refers to the creation of a shared design language that designers/researchers and the stakeholders use to communicate visually and directly with each other. The design language is generative in the sense that with it, people can express an infinite number of ideas (e.g. dreams, insights, opportunities, etc.) through a limited set of stimulus items. Thus, the generative tools approach is a way to fill the fuzzy front end with the ideas, dreams and insights of the people who are to be served through design” (SANDERS, 2006 p. 06).

In turn GDR tends to blur the difference between research and design. When it comes to the FFE, it places itself in the condition of activator of purposeful relational domains. It entails that new capabilities are to be developed by designers, as facilitation, generating platforms and clean references to encourage people at all levels of creativity (SANDERS, 2008, SANDERS, 2006, SANDERS and CHAN, 2006).

Following, a situation of participatory design within certain communities of practice and towards social purposes and activism, can empower everyday people with the means to generate and promote sustainable alternatives to everyday decision-making in subjects as vast as food production, housing, energy, schooling and so on. And as such it can connect both social and ecological activism.

What emerges from here is the role of design in activating platforms, facilitating and integrating different and diverse knowledge to situate and enhance people participation when imagining, endeavouring and crafting an ecologically sustainable culture; and above all, recognising and situating themselves as effective co-participants of this process. This is particularly reflected in Gonzalo Salazar Preece’s explanations:

Design is a particular form of languaging about creating eco-cultural tools that facilitate (or “coordinate”) other eco-cultural coordinated activities. By “eco-cultural tools” I do not mean, as modern epistemologies assumes, that, through design, we create static and consummated objects (such as tables, cars or houses), as if they were static artefacts in themselves, separated from the flow of being-in-the-world. To say that design belongs to a human abstract and bodiless procedure that creates artificial and static things/worlds positioned over a natural one is, in phenomenological and bio-cognitive terms, inappropriate. We do not design without our embodiment, but through it. We do not design over a natural world, but within it. Thus, by “eco-cultural tools” I mean that, through design processes, we create ongoing platforms that, not only are part of the process of living, but also facilitate that process of living. Briefly, through design we do not create static objects, but facilitate a mode of living (PREECE, 2011 p. 60).

#### **4. The Emergence of a Co-creative Design Domain**

As Sanders' proposition refers to co-design as the creativity of designers shared with people not trained in design, working together in the whole span of the design development process (SANDERS and STAPPERS, 2008), a co-creative relational space thus provides the possibility for individuals to understand their own participation in social processes as well as in broader ecological processes alike.

Collective creativity or co-creation as Sanders and Stappers explain refer

“[...] to any act of collective creativity, i.e. creativity is shared by two or more people”. [Its application may range] “from the physical to metaphysical and from material to spiritual” (SANDERS and STAPPERS, 2008 p. 02).

And collective creativity applied across the whole span of design processes is co-design. Co-design is therefore a relational domain of collective creativity. It provides the chance for people to co-author projects and processes equal in stature and possessing unique and relevant knowledge (SANDERS, 2005b p. 04) thus founding a domain of relationships that legitimate and welcome diversity and become a democratic way of generating and sharing solutions. It is the possibility of conversation in mutual trust that is essential to constitute ecological ways of living (CODE, 2006).

If understood as part of our living and doing things together, co-design might exert a transformative pressure over dominant worldviews by threatening existing power structures that are built on traditional top-down hierarchies of command and control “by requiring the control to be relinquished and be given to potential customers, consumers or end-users” (SANDERS and STAPPERS, 2008 p. 05) and also to citizens.

It is also antithetical to consumerism, as it gets closer to collective needs over individualised aims. Therefore it is not all about a new domain of research with its methods and set of methodologies but “it is a mindset and an attitude about people” (SANDERS, 2002 p. 01).

#### **5. Co-design activating participation on the public sphere**

In analogy with the public sphere of participation conceived by Jürgen Habermas and approached by Sandra Jovchelovitch (1995), the co-creative relational space founded by participatory design can also be determinant in shaping individual awareness.

Jovchelovitch (1995, 2000, 2007) emphasises the psychological importance of participation in the public sphere, the conceptualised space where processes of socialisation – conversation and understanding – take place to constitute our system of values, ideas, shared beliefs and practices and is therefore the ground for the emergence of intersubjective realities (CAMPBELL and JOVCHELOVITCH, 2000, JOVCHELOVITCH, 2007, JOVCHELOVITCH, 1995).

Drawing on Habermas' explanations, she clarifies that the public sphere is conceptually situated on the encounter of the three spheres that characterise the bourgeois society: The private sphere — of the individual self and intimacy — the market sphere and the governmental sphere (JOVCHELOVITCH, 1995).

According to Jovchelovitch, their interconnection is essential in modern societies as the existence of a public sphere is decisive to sustain the possibility of democracy and citizenship – where all people participate, through their actions, in the sphere of life that is common to all, and therefore cannot rely on purely private interests and intimacy.

“Furthermore, it is decisive to the constitution of a private life that bears in itself the full consequences of the fact that people live together and there is no human life without the presence of other human beings” (JOVCHELOVITCH, 1995 p. 81-102).

And the participation in social life is

“[...] deeply rooted in the process through which the human subject develops a self, creates symbols and opens up to the diversity of the world of others [and that] the individual, in herself, is the outcome of a process of socialisation”[...] “Individualisation and socialisation are different aspects of one and same process in the ontogenesis of human experience” (JOVCHELOVITCH, 2007 p. 04).

And the processes through which we form our social representations are embedded in the communicative and social practices of the public sphere:

“[...] dialogue, talk, rituals, patterns of work and production, art, in short, social mediation. As such, analyses of social representations must concentrate on those processes of communication and vivid experience that not only generate them, but also confer upon them their peculiar structure. These processes are all mediations, since there is no experience of social life that can be considered immediate. To communicate is to mediate between a world of infinitely different perspectives; to work is to mediate between human needs and the raw material of nature; to develop rites, myths and symbols is to mediate between the alterity of an often mysterious world and the world of the human mind; they all reveal to a greater or lesser extent the quest of humans to make sense and to give meaning to their existence in the world” (JOVCHELOVITCH, 1995 p. 81-102).

The public sphere is indeed a relational domain of co-creation. So by living and doing things together, and when situating co-design for certain purposes, we can construct our participation in society as we can grow as individuals by taking part in regular conversations and negotiations through which we comprehend, situate and confer meaning to our living and surroundings. And furthermore, as Jovchelovitch explains:

“[...] it is through participating that a group of people can develop awareness about its own resources and can engage with significant others in the public arena. These significant others [...] can be dominant, oppressive, potential allies, peer communities, and so on. Awareness about its own conditions and identity, acquired in the process of

engaging with others and stating a project, takes us back to Freire's conscientisation – the process of constructing critical awareness about oneself and the world. Thus, rather than being a given, which can be measured, community participation is an achievement of social and individual life” (CAMPBELL and JOVCHELOVITCH, 2000 p. 04).

If to participate per se represents the possibility of self-awareness and critical thinking it is then complemented with design thinking, which is the building up of ideas to imagine, endeavour and craft a viable and respectful co-existence. The emerging idea of co-design and generative design research can indeed begin to grow as the very possibility of realization and support of certain public spheres, facilitating broader relationship between the individual and society, equal in stature and possessing their unique and relevant knowledge. And if allowed space for further exploring and understanding that a soundness human living is intimately connected to the soundness of natural ecosystems (Wahl, 2006) and to collectively learn how can we live according to its dynamics (ORR, 2002), the same can be extended to human ecological participation in the broader community of life.

Co-creative design processes are thus — from the perspective this paper aims to support — the very possibility to introduce, contemplate and experience a conscious ecological living where design emerges as the expression of doing things together in building a way forward.

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## 7. Notes

(1) Deep Sustainability is the status of living accordingly with the dynamics of ecological systems. It specifically emphasises respect for the intrinsic worth of all beings and treasures all forms of biological and cultural diversity. It is different of “sustainable development” that has a human-first value system (anthropocentric) and has being largely used without a deeper debate on what society aim to sustain in first instance. Hence it has been misused in objectivist and compartmentalised contexts that cannot express deep sustainability.

(2) The explanations of authors like Rob Hopkins (2008), David Holmgren (2009), John Michael Greer (2008, 2009), James Howard Kunstler (2006), Mike Hulme (2009), Tim Jackson (2009) and Charles Eisenstein (2011) present arguments supporting that the pace of anthropogenic alterations to the physical Earth and the current pace of economic growth and demand for natural resources follow a path of collapse. It means that our current social, economic and ecological mode of organisation with human first values-system do not fit a paradigm of deep sustainability, being necessary therefore construct new worldviews able to disrupt the current imaginary of command and control over Nature and to found new forms of sustain our living within the dynamics of ecosystems. These authors also raise major propositions in this way.