

# NEW SPACES, PLACES & MATERIALS FOR CO-DESIGNING SUSTAINABLE FUTURES

by LIZ SANDERS





If we're to design sustainable futures, we'll need to do it collectively. How can we foster collective thinking and creativity? Unfortunately, we don't know much about the spaces, places and materials that can support and inspire collective creativity. It's time we learned.

## EVERYTHING IS SOCIAL NOW

Design has been growing in scope to embrace the larger social contexts of products and services. In the past, design was focused mainly on material concerns with the embodiment of design ideas in the form of products, environments or communication systems. But now the conversation is about design for experience, design for service, and design for transformation. Everyone wants to play in the social design spaces. Designers, students and educators talk about design for social good and design for social impact. People from the business community talk about social innovation. The art community is exploring social practice. Social practice can mean anything from art work about social issues, to provocative art installations, to community-based, participatory practices.

Who will be involved in the emerging social design spaces? What roles will designers play when everything is social? The answers to these questions will vary depending upon the mindsets of the people involved.

## THREE DISTINCT MINDSETS ABOUT SOCIAL DESIGN CAN BE SEEN IN PRACTICE

Social design spaces are proliferating rapidly and the landscape can be confusing. But some patterns can be seen. Designers have (at least) three mindsets to choose from:

- 1. DESIGN FOR PEOPLE:** Here designers are considered to be the experts in designing for others. The focus in practice is on the traditional forms and formats of objects, spaces and systems.
- 2. DESIGN WITH PEOPLE:** Here designers take on new roles. Because they invite end-users and other stakeholders into the design process as co-designers, designers become facilitators who help others to be creative. An advantage to this approach is that the co-designers will take pride in and ownership of the process, leading to sustainable results.
- 3. DESIGN FOR CHANGE:** Here designers turn to the applied social sciences and use probing, provoking, and other interventional means of getting people to change their behavior. For example, this approach is being explored in addressing healthcare situations such as obesity. But some people are concerned with this approach since it has the potential to infringe on personal rights.

In this short paper I'll talk mainly about design with people where designers learn to facilitate the creativity of others. In order to design with people we need to know more about how spaces, places and materials can contribute to creativity.

## CONTEXTS OF CREATIVITY: A FRAMEWORK

There are many competing theories about what creativity is and how it works. Contexts of Creativity [8] is not another theory about creativity. Instead, it is a framework for organizing what we know about creativity in order to help people facilitate the creativity of others. Figure 1 shows the layers of context that contribute to individual creativity. It shows that individual creativity is not only in the head (as once was thought)

but in the heart as well because creativity is affected by emotion. And creativity takes place in the body. It is evoked through activity and motion. [4] And the last layer shows that creativity is affected by the environment and the materials that are present.

Collective creativity is shown in Figure 2 as a group of diverse individuals connected in thought and action while working together on a very big idea (i.e., the green splat). Collective creativity uses all of the contexts of creativity (head, heart, body, places, spaces and materials) to support and scaffold the shared space of thoughts and ideas. When collective creativity is working well, everyone contributes simultaneously to the big picture that comes from the shared mind and body space. The co-construction of the big picture is essential for collective creativity and this is where the importance of the materials comes into play. The tools and materials must possess generative potential. [7] Communication design will soon undergo radical transformation as we learn more about creating such materials and tools to support and provoke creativity.

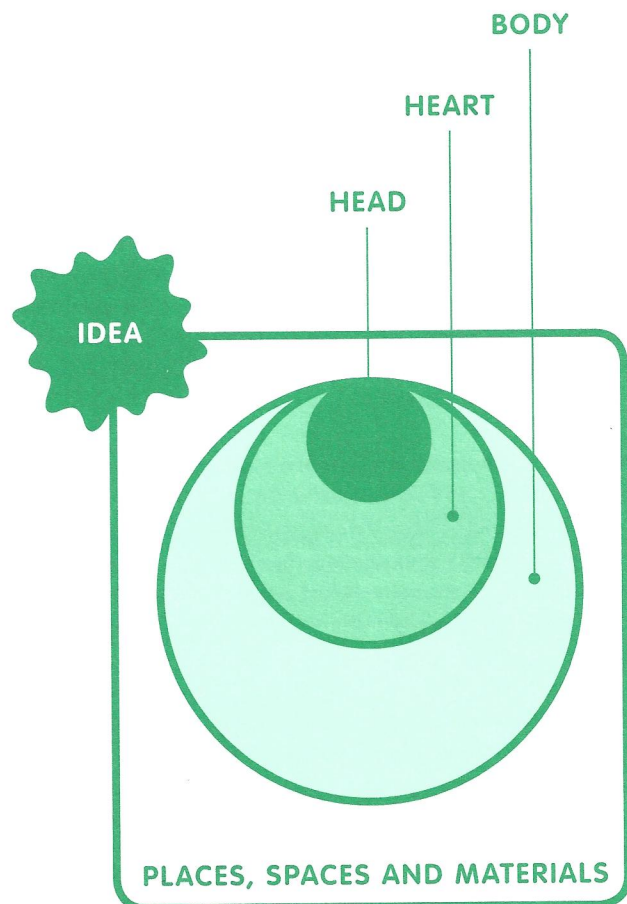


FIGURE 1. Individual creativity

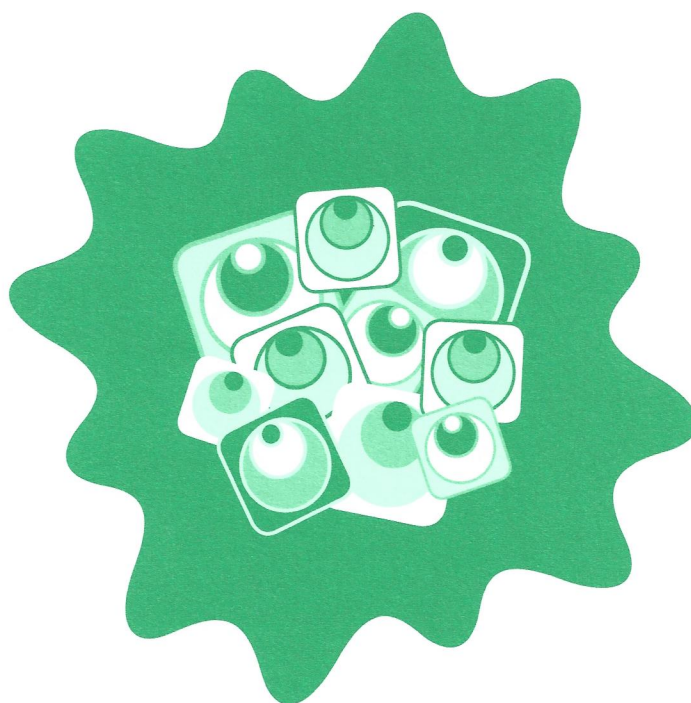


FIGURE 2. Collective creativity

### HOW MUCH DO WE REALLY KNOW ABOUT CREATIVITY?

We know a lot about creativity in individuals but very little about creativity shared between people. [8] The matrix in Figure 3 distinguishes between individual and collective creativity across three levels of context that could affect the output of creativity: the socio-cultural space, the physical environment, and the space of tools and materials. The size of the splat indicates the amount of research in each of the cells. We know the most about individual creativity in the socio-cultural space, followed by individual creativity in the physical environment. The other four cells are largely unexplored. (But see Sanders [8] for more information on these four cells).

There is not much research at all on collective creativity. There is some, such as socio-technical environments to support “social creativity” in urban planning, collaborative learning, and collaborative software design. [3] But there’s not much more than that. And there’s not much research about the impact of tools and materials on creativity, although this is an area that I have explored in practice and described in a book called *Convivial Toolbox*. [7]

### SOURCE OF INSPIRATION: TRANSFORMATIONAL GROUP EXPERIENCES

Since we don’t have much to draw on from the published research on the impact of spaces, places and materials on creativity, it makes sense to look for other sources of inspiration.

Renee Levi [5] studied transformational group experiences and found, unexpectedly, that the “place or space in which magical moments in groups happened was identified by over half of the study’s participants as influencing their felt shift from a collection of individuals to a true

collective able to think and work together.” This finding was surprising to Levi in that she did not anticipate it, nor did she ask about it. She explored extraordinary group experiences further [5] and found the following qualities to be important.

- The place is distant from people’s daily lives.
- There are welcoming elements of the facility (e.g., long entrance roads, people to greet you).
- The main meeting room is the right size and shape.
- There are places for sitting and walking side by side.
- The space contains symbols (e.g., objects or materials) that can be called upon to evoke meaning.
- There are open interior spaces with both public and private spaces available within them.
- The windows offer views of nature.
- Natural materials have been used in construction.
- The space contains elements that remind people of home.
- The food is fresh and healthy.
- There are opportunities for people to explore and challenge themselves.

Levi’s research covered many other qualities of transformative spaces. The list above describes only the physical environmental attributes.

### ANOTHER SOURCE OF INSPIRATION: REGGIO EMILIA PRESCHOOL

Inspiration comes also from alternative approaches for the education of very young children: Waldorf, Reggio Emilia and Montessori. [2] The Reggio Emilia approach is explicit about the environments and materials needed to scaffold the child’s learning. In fact, Reggio Emilia practitioners refer to the environment and the materials available in it as the



## INDIVIDUAL CREATIVITY

## COLLECTIVE CREATIVITY

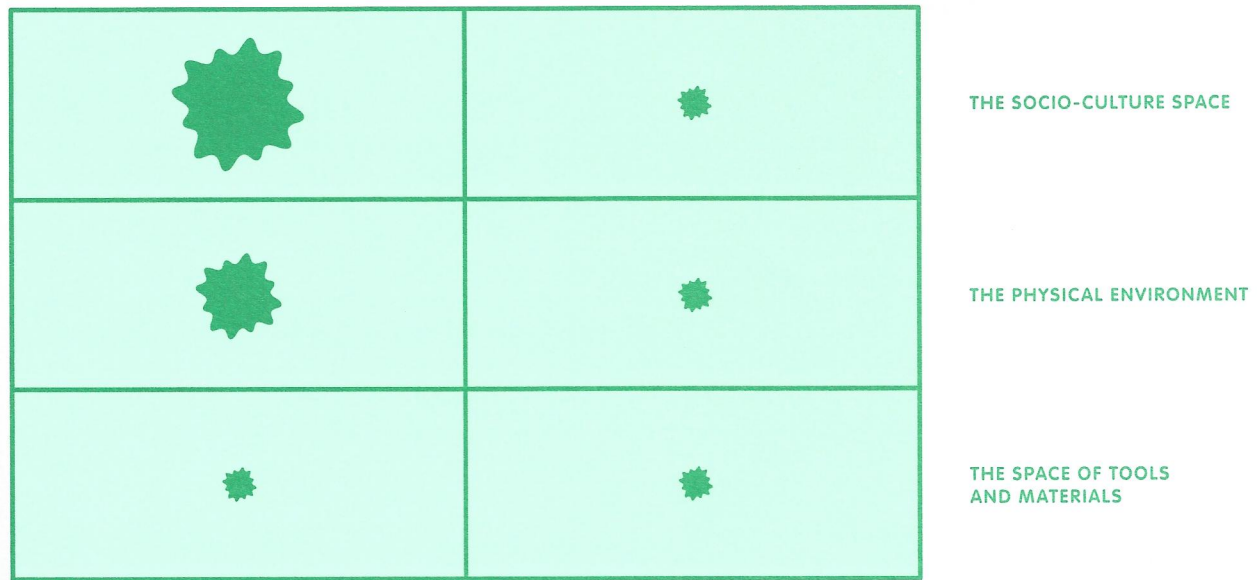


FIGURE 3. How much we know about creativity

"third teacher" (who is in addition to the two teachers who collaborate daily on each child's learning journey).

The spaces, places and materials in a Reggio Emilia school are described as follows (adapted from Caldwell). [1]

- The front door welcomes you.
- Natural light flows into as many parts of the space as possible.
- The halls are much larger than normal, with places to stop and sit as you go.
- There are studio spaces in each classroom as well as spaces designated for small and large group activities.
- Provocation stations with carefully selected and arranged materials invite manipulation and exploration along a specific theme.
- Large inner windows connect the interior spaces.
- Wall-size outer windows provide views to the outside and doors to the outside can be found in every classroom.
- The walls are painted a neutral color so that you can see the children's projects that are exhibited on the walls in the classrooms and the hallways.
- There is documentation about each project in the form of statements made by the children as they talked about their projects.
- A wide range of quality materials is available: tempura paint, water-color, wire, weaving, collage, natural materials, cardboard/paper construction, and light, color and transparency at the light table.
- These materials are beautifully arranged and displayed in containers that sit on low shelves backed by mirrors.

## IMAGINE A FUTURE

What if we combined the qualities of Reggio Emilia preschool environments with the qualities of transformational group spaces to create spaces, places and materials for adults to engage collectively in creative thinking and making? These environments for co-designing will have a positive impact on people's ability to address complex social issues and imagine future possibilities. They will be the new materializations of the social design spaces. If we learn to master the new spaces, places and materials for co-designing, we'll see a future capable of supporting new levels of conviviality and cultural sustainability.

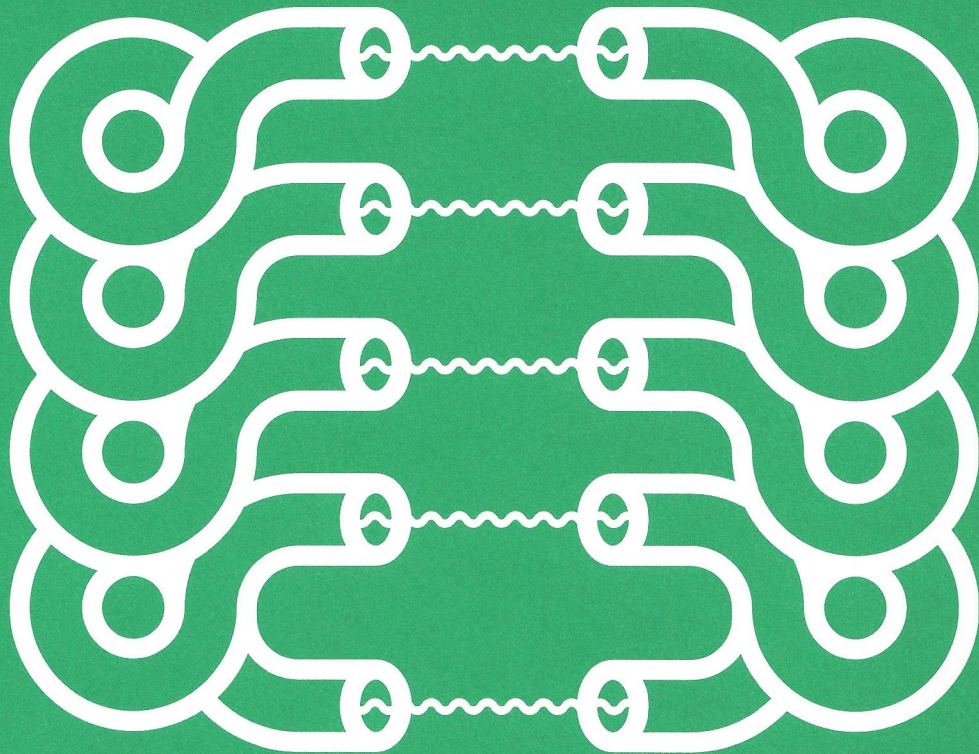
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- [1] Cadwell, L.B. *Bringing Reggio Emilia Home: An Innovative Approach to Early Childhood Education*. Teachers College Press, New York, 1997. [2] Edwards, C.P. Three approaches from Europe: Waldorf, Montessori and Reggio Emilia. *Early Childhood Research and Practice*, 4 (1), 2002 [3] Fischer, G. Social creativity: Making all voices heard. in *Proceedings of the HCI International Conference (HCII)*, (Las Vegas, 2005). [4] Leung, A.K.-y., Kim, S., Polman, E., Ong, L.S., Qiu, L., Goncalo, J.A. and Sanchez-Burks, J. Embodied metaphors and creative "acts." *Psychological Science*, 23 (5). 502-509, 2012 [5] Levi, R. Group Magic: An Inquiry into Experiences of Collective Resonance. Dissertation Abstracts International (UMI No. ATT3098829), 2003. [6] Levi, R. *The Powers of Place: An Inquiry into the Influence of Place, Space and Environment on Collective Transformation*. 2008. Retrieved from [http://www.collectivewisdominitiative.org/papers/levi\\_place.pdf](http://www.collectivewisdominitiative.org/papers/levi_place.pdf). [7] Sanders, E.B.-N and Stappers, P.J. *Convivial Toolbox: Generative Research for the Front End of Design*. BIS Publishers, NL, 2012. [8] Sanders, E.B.-N. Creativity in strategic thinking. in Wolters, H.M.K., Grome, A. and Hinds, R. eds. *Enhancing the Army's Strategic Thinking Capability: Insights to Assess, Develop, and Retain Strategic Thinkers*, Research Report for U.S. Army Research Institute for the Behavioral and Social Sciences, 2012.

For photos of Reggio Emilia inspired environments and materials, see <http://pinterest.com/search/pins/?q=reggio+emilia+spaces>



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