



What can we learn from COVID-19 pandemic for design creativity research?

Gaetano Cascini , Yukari Nagai , Georgi V. Georgiev & Jader Zelaya

To cite this article: Gaetano Cascini , Yukari Nagai , Georgi V. Georgiev & Jader Zelaya (2020) What can we learn from COVID-19 pandemic for design creativity research?, International Journal of Design Creativity and Innovation, 8:3, 141-143, DOI: [10.1080/21650349.2020.1771867](https://doi.org/10.1080/21650349.2020.1771867)

To link to this article: <https://doi.org/10.1080/21650349.2020.1771867>



Published online: 09 Jul 2020.



Submit your article to this journal [↗](#)



Article views: 2279



View related articles [↗](#)



View Crossmark data [↗](#)



What can we learn from COVID-19 pandemic for design creativity research?

In less than a quarter, the time between two consecutive issues of IJDCI, the COVID-19 outbreak has suddenly revolutionized the life of almost every human being. The daily reports by the World Health Organization depict a dramatic situation at a global level (more than 4,4 million cases and about 300 thousand deaths reported until May 15th) and pictures of everyday life from all over the world are not less impressive. In a very short time, people had to radically change their habits and adapt to circumstances they were not prepared for (Figure 1).

The analysis of what happened in the medical sector is out of the scope of this journal. However, it is apparent that organizations at any level (not only health-related), just like complex systems as well as simple every-day products, turned out to be unfit for the pandemic and most of the improvised solutions people put in place were largely due to individuals' intuition and endeavor.

What could be learned for improving the design of the next products, systems, organizations? What is the actual contribution of design creativity in ensuring the resilience of society and its means? Is design research well-oriented and structured to improve the humans' capacity to cope with unexpectedness?

The debate on how to face the global economic crisis that might follow is just at the beginning, but the impact is likely to go way beyond economics: we might be in the turning point of our social, political, economical, and educational life. Everything could be significantly different afterward.

It is interesting to notice that the design community has been debating for many years about the speed of changes we are observing nowadays. Nevertheless, only a few science fiction writers had imagined such a sudden revolution in people daily life due to a pandemic and there is a lot to learn from this experience. This is an opportunity to turn into practice the so celebrated role of creativity in finding new solutions for the wellbeing of society, in producing responsible and sustainable design to increase the resilience of our organizations. After all, in ancient Greek, the term 'krisis' did not have a negative connotation compared with how the term 'crisis' is used in today's languages. Krisis used to refer not only to separation, but also to reflection and assessment.

To further develop this ambition, Nathan Crilly, member of the editorial Advisory Board of IJDCI, suggested the closing paragraph by Arundhati Roy in (Roy, 2020): *'Historically, pandemics have forced humans to break with the past and imagine their world anew. This one is no different. It is a portal, a gateway between one world and the next. We can choose to walk through it, dragging the carcasses of our prejudice and hatred, our avarice, our data banks and dead ideas, our dead rivers and smoky skies behind us. Or we can walk through lightly, with little luggage, ready to imagine another world. And ready to fight for it.'*

The IJDCI journal would like to contribute to this debate hosting position papers, as well as open letters, that propose constructive reflections on new practices the design research community should adopt to interact more proficiently, to target better our research endeavor, and to have a more tangible impact on society.

As a first step, the Editorial and the Steering Advisory Boards of IJDCI were invited to share their preliminary thoughts emerging from the recent experience. In particular, we asked for reflections on the following points with the current understanding and awareness of the challenges that COVID-19 introduces to society:

- Research topics that would have deserved higher attention and reasons behind the lack of interest or investment on them;
- Studies of the design community that could be helpful to cope with the COVID-19 outbreak and to support the next stages after the peak of the pandemic;
- New practices that the design community should adopt to interact more proficiently, to target better our research endeavor, and to have a more tangible impact on society.



Figure 1. Everyday life after the COVID-19 outbreak.

A detailed report of the collected inputs is beyond the scope of this editorial. However, it is worth mentioning the main traits of the emerging discussion.

From an overall perspective, Philosophy of Science offers a solid ground on the structure of scientific revolutions that could inspire reflections on possible revolutions in design. Borrowing from (Crilly, 2010), '[...] *two perspectives on creative progress predominate in the design literature. On the one hand are those accounts that emphasize the effect of sudden insights, and on the other hand are those that emphasize gradual and cumulative change. Unfortunately, these different perspectives have largely existed in mutual isolation or are presented in mutual opposition. In contrast, [...] these two perspectives can not only coexist, but should actually be combined. Sudden insights are prompted by – and resisted because of – the periods of incremental development that precede them. Each type of episode can only be understood in relation to the other because they are interdependent*'. What recent studies with an incremental innovation trait could nurture more radical changes in design research and practice?

Many comments from the member of the advisory boards focused on previous studies about collaboration in design and related supporting means: a challenge that COVID-19 has introduced to society is how to interact with others when the possibility to meet face to face suffers some restrictions. For example, the pandemic has influenced the way that people (including designers and non-designers) share and exchange information, replacing personal with virtual communication. This practice will likely continue when the pandemic abates, as people will understandably be nervous about traveling or engaging with strangers, thus creating the opportunity for virtual communication technology to move beyond gaming and into the mainstream.

While virtual or remote interaction has incremented significantly during the pandemic, teamwork as a research subject has gained more relevance than ever. At an organizational level, research on distributed working and the impact this has on creative cognition will gain more importance as the context has radically shifted.

Furthermore, design research has largely studied the sensitivity of designers in creative sessions to body language, gesture, intonation and many subtle communication qualities that are not easily conveyed in videoconferencing tools. New means of visualization – namely Virtual and Augmented Reality – offer new possibilities in collaboration. While there is a body of work starting to emerge on the effectiveness of immersive prototyping, there is less on the communicative aspects and how these could support meaningful engagement across distributed design teams. On a practical side, a critical concern of digital devices for distance communication is hygiene. The days of people sharing headsets and controllers are likely to be over. New strategies for cleaning, surface treatment, and disposability are ripe for investigation, particularly in relation to such high-end equipment.

Besides, increased familiarity in distant collaboration opens new chances of informal knowledge sharing, new forms of conferences and workshops for multi-level scientific international collaborations as well as small, local projects that can inform and strengthen the resilience and creativity of people and communities to face the next 'unprecedented' crisis.

On a similar thread, while kids, teenagers and college students all experienced the limitations of distance education with respect to traditional face-to-face interaction, an unexpected broad community of students and teachers also recognized some advantageous features of digital technologies in education. It is now evident that we all should be much more creative about hybrid or remote pedagogies for active and hands-on learning of design. Several IJDCI board members see an opportunity for the design research community to develop tools and training materials distributed to practitioners for use and feedback. The coordinated efforts required to develop and implement such materials would change the nature of collaboration within the field and lead to outcomes that might be helpful for both practitioners and researchers and might tackle some of the much-discussed fragmentation in the field, accelerate impact and improve research.

Further established research topics in design research might gain a new prominence and prompt further discussion in the community:

- agile methods and approaches suited to promptly react to extreme situations such as pandemics, catastrophes, unexpected global events;
- means and approaches for community-based open-source design for developing tools and products of general interest for the community (e.g., for Personal Protective Equipment);
- research on mass-customization and personalization for tailoring products and services in the next 'normal' life; and, most of all, a boost of the interest in sustainable design in its broader perspective.

Beyond these, it is known that in academia it is usually more convenient to work on well-established themes than on peripheral topics. Will the new scenario bring a shift in research priorities?

IJDCI is interested in hosting contributions on those topics; researchers and practitioners are welcome to share their thoughts and studies.

All the above are just a starting point for promoting a more thorough discussion among all scholars and researchers in the field of design creativity and innovation. The next step is a panel discussion that will be held online (in line with the above-mentioned trend) within the 6th International Conference on Design Creativity (ICDC2020) organized by the University of Oulu (Finland) from 26th to 28th of August (More info on <http://icdc2020.org/>).

Furthermore, submissions for IJDCI on any theme connected with this general intent are most welcome.

Acknowledgments

We would like to thank Niccolò Becattini, Jean-François Boujut, Hernan Casakin, Nathan Crilly, Alex Duffy, Damien Motte, Ricardo Sosa, Mario Štorga, Andrew Wodehouse and all the other members of the Editorial and the Steering Advisory Boards of IJDCI who anonymously contributed to the discussion.

References

- Crilly, N. (2010). The structure of design revolutions: Kuhnian paradigm shifts in creative problem solving. *Design Issues*, 26(1), 54–66. <https://doi.org/10.1162/desi.2010.26.1.54>
- Roy, A. (2020, April 2). The pandemic is a portal. *Financial Times*. <https://www.ft.com/content/10d8f5e8-74eb-11ea-95fe-fcd274e920ca>

Gaetano Cascini, *Politecnico di Milano, Milano, Italy*

 gaetano.cascini@polimi.it  <http://orcid.org/0000-0003-1827-6454>

Yukari Nagai, *Japan Advanced Institute of Science and Technology, Nomi, Japan*

Georgi V. Georgiev, *University of Oulu, Oulu, Finland*

Jader Zelaya, *Japan Advanced Institute of Science and Technology, Nomi, Japan*