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With the Cumulus vision to actively promote exchange of knowledge and design experience on a global and interdisciplinary scale, three Russian schools from St. Petersburg and Moscow — HSE Art and Design School (HSE University), St. Petersburg University, and Peter the Great St. Petersburg Polytechnic University have joined their efforts to host an online conference in collaboration with Cumulus.

‘Design: Vertical & Horizontal Growth’ was a precursor to the official annual Cumulus Conference. Postponed due to COVID-19, this will now take place in Moscow and St. Petersburg in June 2022. Since staying connected is critical in the ongoing COVID-reality, three Russian universities decided to make participation free of charge. The conference was held in digital format in October 2020.

‘Design: Vertical and Horizontal Growth’ aims to encourage the Cumulus community to express their opinions on the role of design as a humanizing practice in the context of multidirectional development complicated by the COVID pandemic.

We decided to invite the participants to explore issues surrounding the design community’s involvement in the innovation process. How can design thinking help society overcome its fear of and resistance to the main challenges of our time? In what ways could we bridge the gap between traditional living patterns and the changes rapidly occurring in all areas of society today?

We need a communicative model that would smooth over the differences between the horizontal and the vertical processes.

The perpendicular development vectors — x and y — shape the space of interpretation, aims and objectives of design. The horizontal vector represents cultural values and the conventional lifestyle; this is an area of social comfort. The vertical vector represents innovations that destroy the familiar way of life. Our discussion focuses on design as a practice of searching for areas of growth, support and balance, which make it possible to reconcile the traditional way of life and cultural values with the innovative approach to solving problems arising in society.

The three-day conference was held from 28 to 30 October 2020. Each day has covered one of the conference’s tracks:

Future Human, Creative Industry, Inter-action. Each host (SpbU, SpbSTU, HSE) was responsible for one track. This approach has presented a diverse Russian art and design academic community eager to exchange ideas with colleagues worldwide.


These words, picked from the well-designed introduction to the days we spent together online with ‘Design: Vertical & Horizontal Growth’ Conference, match so perfectly this quality time with three Cumulus member universities in Russia, 28–30 October 2020. The event was vastly important for advancing education and research.

Business, industry, non-profit institutions, government. Planet, Profit. We, as the humans at the heart of our disciplines, are in the same carriage now, driving the world forward with the tools provided by art, design and media. With massive responsibility, unquestioned. This time, we landed together in a country of great creativity and innovation, to share knowledge as we make steps forward. For many conference participants, the event opened the door to a new and very interesting environment. ‘Fluline’ revealed to us this setting as a truly wonderful one to experience.

DVHG has gone down in design history as a unique beginning of three Russian universities jointly organizing an event of this calibre. Participation was impressive, with close to 900 people from Russia and abroad.

“Design: Vertical & Horizontal Growth” was a prelude to the first Cumulus conference which will take place in 2022, hosted by these three universities. Can we expect anything different then? Yes. You will be able to touch, hug and sense the humans, and the environment. Vertical & Horizontal created for us a ‘centre of gravity’ to meet again in Russia. Thanks to all our organizers, speakers, and participants, we also live forever online with DVHG. We can’t wait to return.
The concept of the human body and its capabilities is today under review due to the development of technologies changing the body structure by means of surgery, genetics and technological correction. As a result, the body becomes a platform of transformation. Today it is an object of design reacting to this online extension we are forced to undertake. Furthermore, the ‘online shock’ we have witnessed during the pandemic has given rise to a media extension. As the global lockdown forced both business and personal communication to go totally online, the concepts of one’s presence and face-to-face encounters have taken on a new aspect. How could we describe the effect of this ‘extended communication’ which, henceforth, will involve us all? What are the effects of the ‘mediated’ body? How are science, art and design reacting to this online extension we are forced to undertake?
28th of October
HSE Day:
“FUTURE HUMAN”

11:45–12:00 Opening remarks: EIJA SALMI (Cumulus Association), TATIANA RIVCHUN and LIUDMILA ALIABIEVA (HSE University, Russia)

12:00–12:40 LEV MANOVICH (City University of New York, USA): “Aesthetic Society”

12:40–13:00 HELENA NIKONOLE (Artist, independent curator, Russia): “Art & Science Practices: Beyond Human”

13:00–13:20 IRINA SIROTKINA (Institute for the History of Science and Technology, of the Russian Academy of Sciences, Moscow): “Cyborgs or Wearable Technologies? Commentaries on the future”

13:20–14:00 LAINI BURTON (Queensland College of Art, Griffith University, Australia): “Filters and Fakery — The 21st Century Mask”

14:00–14:20 TATIANA FADEEVA, ALEXANDRA STARUSEVA-PERSHEEVA (HSE University, Russia): “See You in Zoom: Digitally Extended Presence as a New Normal”

14:20–14:40 ALEXANDER ZHURAVLEV (HSE University, Russia): “The Return of Avatar as Ever-changing Postdigital Identity”

14:40–15:20 DMITRY BULATOV (National Center for Contemporary Arts (The Baltic Branch), Russia): “Posthuman Curating”

15:20–15:40 AMMER HAR (Politecnico di Milano, Italy): “Humans, Technology and Speculative Design Futures: Can We See the Invisible?”

15:40–16:00 KELLIE WALTERS (Garmin International, USA): “Nance: Satirical Jewelry Design for Feminist Perspectives in Augmentation”

16:00–17:00 ROUND TABLE WITH ARS ELECTRONICA CURATORS (CHRISTL BAUR, OLGA VAD, HELENA NIKONOLE, ANDRIESH GANDRABUR): “Art and Technology Trends in Pandemic Realty”

17:00–18:00 AI X SOUND PERFORMANCE “Non-player Piano”
We live in aesthetic society where the production of beautiful images, interfaces, objects and experiences are central to its economic and social functioning, as well as the identities of hundreds of millions of people. The new aesthetic media society has a much larger scale than aesthetic societies in the past; it is in many ways global; and its development is facilitated by global information and media networks (e.g. Instagram, YouTube, etc.). For example, between 2016 and 2020, the number of smart phone users (phones with advanced cameras) grew from 2.5 to 3.5 billions. A large proportion of these users capture photo and video, and they make aesthetic decisions in this process. They try to make their photos beautiful, they think about composition, and many of them may edit their photos to enhance their aesthetic features. The company behind one of the most popular photo editing app today founded in China talks about its mission in this way: “Founded in October 2008, Meitu has become one of China’s top Internet enterprises owing to its leading AI-driven image-and-video processing technologies and social community. Meitu’s mission is ‘to let everyone become beautiful easily’, with the concept of ‘beauty’, or Mei (美) in Chinese, as the company’s core ideal.” Meitu app currently (Fall 2020) has one billion users globally. The app functions allow users to beautify their faces in the captured photos and also do many other editing. One important feature of contemporary aesthetic society is its increasing adoption of AI technologies to assist users in their creative activities, such as capture and editing.
The aesthetic society is the society where where aesthetics, design, and artistic creativity, originality, and innovation play the key roles — both symbolically and economically.

The war is a good example. In general, between 1870 and 1980, experimentation, explicit departure from traditions and rules and the pursuit of unique style by each creator mostly happened in areas of literature, music, and art. In other words, it was mostly an exclusive domain of the modernist arts.

But after 1980, mass culture slowly starts to adopt these ideas. In the 1980s, the bou- liques absorbs installation art; music videos absorb ex- perimental film; fashion enters its "modernist" experimen- tal phase. (MTV was started in 1981, the same year as IBM released the first PC. The first "aesthetic computer" was Apple's Macintosh released in 1984.)

Similarly, is it possible to reduce the recent phenomenon of an- aesthetization to a single concept — traditional Asian "the aesthetics of living"? The Introduction to 2014 collection Aesthetics of Everyday Life: East and West notes: "...Chinese, Japanese and Korean traditional aesthetics..." whereas aesthetics in the West tends to focus on the extraordinary, East- ern aesthetics already understands that the aesthetic may popu- late both the extraordinary and the ordinary forms of experience.

Although it is tempting to see the rise of anesthetization and design wave starting in middle of the 1990s as the ex- pansion of traditional Asian aesthetics, in my view the real story is more complex. Consider this timeline. In the 1910s–20s, European geometric abstract paintings and sculpture establishes first modern "minimalist" aes- thetics. In the 1920s, this aesthetics is designed to describe the objects, graphic design, typography and photography by people teaching in Bauhaus in Germany and Vkhutemas in Russia. In the 1960s, a new minimalist movement concept "aesthetization of everyday life", with some connecting to the traditional concept "everyday life" and its "functional" and "minimalist" ideals can be traced to the 1920s and 1960s. But there are also important newer aesthetic structures on these bases, for example, wood and stone, and the incorporation of deliberate- ly "non-designed" elements such as raw concrete walls. Similarly, the concept "aesthetization of everyday life" in both developed and many de- veloping countries to a single concept — traditional Asian "the as- sociated with modernist "clea," and "simple" look, the generous use of "negative space" and white backgrounds, "less is more" and "minimalism" ideals can be traced to the 1920s and 1960s.
In my view, the three stages of aesthetization – 1990–2020 – first in professional space and design architecture, then in professional products, design (software), and media (cinema, TV, photography), and then in “everyday life” of normal people – were happening in both West and East at the same time. The 1990s, especially, were the most important period of aesthetic development in the world, with the change in the aesthetic of daily life and society became more important than in the mass consumer society of the past. The reason for this change is that the design has become a necessary function of life, and more and more people can afford to buy new items often. Although these changes have affected all classes, they matter less as tools of distinction. Aesthetics is a core concept in the development of society and culture, and it is more important because it matters to more people.

As described in Pierre Bourdieu’s book Photography: A Middle Brow Art (1995) for most people involved in popular photography at that time, aesthetics was seen as something foreign – reserved for professionals and upper classes. Comparing this to today, where Instagram in the second part of 2010s, we see a big difference. In my Cultural Analytics Lab, we used computational tools to analyze 17 million Instagram photos shared between 2010 and 2016. We found that in the West and big cities, a significant proportion of people were aware of the aesthetic possibilities of the medium, as opposed to only following photo conventions that dictate what subjects and occasions one should photograph. In another example, today one can look stylish, contemporary, and aesthetically “fresh” that many offerings of most expensive brands that feature high-quality fabrics in suits, shirts, or pants, and accessories, often look more interesting and more aesthetically pleasant, which is also a result of aesthetic development. If you simply visit Zara or a department store selling high-quality fabrics, such items are usually designed for certain occasions, and most importantly easily combinable with many other items. (Here minimalism and monochromatic clothing is part of the culture.) Indeed, this has changed significantly since 2010s, with many people acquiring a new understanding of the aesthetics of daily life, and society became more important than in previous periods. The change in the aesthetic of daily life and society became more important than in the mass consumer society of the past. The reason for this change is that the design has become a necessary function of life, and more and more people can afford to buy new items often. Although these changes have affected all classes, they matter less as tools of distinction. Aesthetics is a core concept in the development of society and culture, and it is more important because it matters to more people.
Dr Laini Burton is Senior Lecturer at the Queensland College of Art, Griffith University where she is the Convenor of Higher Degree Research Programs. Her research interests centre on body politics, bio-art and design, contemporary art practice and criticism, fashion theory, performance and body/spatial relations. In particular, her focus lies in the historical dimension and contemporary applications of new technologies in art and design, including areas such as embodiment and technology, and the shaping of identities and everyday life by through creative practices.

Laini Burton: “Filters and Fakery — The 21st Century Mask”

E.M.: What role did assemblage play in the formation of virtual masks — with ‘stuck on’ details, including faces? Could we see this as a past phase used for new effects, which due to new technologies has developed into a separate field of experiment with facial images?

L.B.: Humanity’s long history of experimentation with the face and body means that new technologies are just another manifestation of our fascination with our image. Technology is in a constant state of innovation, be it surgically invasive such as cosmetic surgery, or virtual alterations using apps, through to ‘borrowed’ faces seen in deep fake technology. I see all these as applications as examples of how we struggle with the philosophical mind/body dilemma. Although, philosophy has wangled with this binary to reveal it is far more complicated. It is what keeps us guessing, writing, studying and creating. Rue the day that the human brain is ‘decoded’. I like mystery, and I think what makes us interesting is the mystery of the unknowable human mind.

E.M.: What is the place of identity in the modern virtual world of self-presentation? May we say that sincerity prevails in verbal expression (in confessions, etc), while the world and politics of images have entirely captured social networks and other online areas?

L.B.: This is a huge question, and difficult to answer in brief. Identity politics are becoming increasingly complex as the world shifts and changes. These changes are dependent upon so many socio-cultural, political, historical and economic conditions that it is impossible to arrive at a singular position. Identity and representation will always be at the core of human interest. It is how we define ourselves. We are essentially an anthropocentric species which, unfortunately, has dire consequences for our environment and our fellow non-human companions on Earth. Humans will always be captivated by their own image. The question remains, is there any room for other species in our imagination for the world to be shared in a way that does not place the planet in environmental crisis?

The Anthropocene is a real threat, and yet, we do not hear its call. When we are gasping for air, no image, social network, or web presence will save us.

E.M.: In your speech, you cited the words of one of the creators of the film Chechnya. He said that the mask “…allows the hero, speaking with his voice with someone else’s appearance, to express his identity”. Do you agree with this? What feelings did you have as a spectator when you saw the real face of one of the main characters, when he decided to give a press conference?

L.B.: Did the other heroes at this moment become more real, or were they just as faked as the ‘deep fake’ characters, whose identity we can’t fully perceive?

E.M.: Can we talk about ‘anti-masking’ trends to day? I mean an honest self-demonstration as a response to the countless possible and available transformations. Or is unsightliness inevitably rejected?

L.B.: First, it is useful to distinguish ‘anti-maskers’ in the coronavirus epidemic as being a different form of anti-masking. These people are foolish in my opinion. It is not difficult to wear a piece of cloth on your face to protect yourself and others from deadly viruses. I am astonished by the anti-masking sentiments of some people. These attitudes herald the lack of education about viruses and transmission. The least we can do for our fellow humans is wear a mask to ensure the health of the collective and return — if possible — to pre-coronavirus freedoms. Second, I hope I understand your question correctly to assume that you refer to people who choose not to mask their face with digital technologies (filters, apps) or undergo any surgical augmentation? If so, then people who choose not to filter their face/body, or use apps to alter their appearance, or have surgery to change their appearance, are admirable. As I have noted above, the media and beauty industries wield significant power in constructing cultural beauty standards. To reject this pressure is to assert real confidence. However, these tools have also become a way for some users to gain self-confidence. This is contextually dependent. Younger generations will always be the first to take up these opportunities, and they will also be the loudest voices in terms of resistance to them. What is necessary is education around digital literacy in the use of these tools, so people do not come to have unrealistic expectations about themselves or others. I do sometimes wish that messages of self-acceptance were louder than the call of some of these technologies, and proofread material.

E.M.: What does it tell researchers and common users that people have started to experiment so readily with their image, including their body and age, using masking apps?
L.B.: What people do with their appearance, or how they relate to their bodies or aging is dependent upon so many factors—class, culture, colour, economic conditions, education, and sexuality among them. These positionalities have consequences for the way we experience and perceive our bodies, and our lived subjectivity. I can only connect deeply to my own experience in these facts of life. And, I do separate my experience as a scholar and researcher from my experience as a common user of mask applications. As a scholar I am more critical, analytical and reflective, whereas when engaging with these technologies as a common user, I am more playful.

When I analyze how the phenomenon of masking is applied in various platforms and disciplines (Instagram, film, art, fashion), it is clear that representation remains a central concern for humans. Since records began, and since cave paintings were discovered, we can see that humans have always been concerned to record and represent themselves in particular, usually favourable, ways. Ultimately, we are a vain species. Yet representation is so much deeper than this, as discourses on beauty, critical race studies, aesthetics and so many other fields of inquiry reveal.

E.M.: The coronavirus has affected the fashion industry, including work itself with a mask. What is the leading trend: a) a mask as something basic (but a designer one), or b) a mask as a bright accessory with a utilitarian function (like a fan or a bonnet)? How do you see it? And which of these approaches is more likely to take root in the future?

L.B.: It can be both a and b. What I believe scholarship on masks and masking will do is allow a broader interpretation of masks, their uses and function. Although, how an individual adopts the mask will be entirely subjective. They may see it as a base artefact, worn out of necessity, or they may see it as an accessory. Sometimes, they will combine these two. What will be telling is how our attitudes to masking change as the possibilities and conflicts arise through its application.

E.M.: Every mask is a tool for being in a role, seeing yourself as someone else, interacting with the world around us, different. Do masks in the twenty-first century and VR headsets have any common features? Or are they completely different things?

L.B.: This is an interesting question that invites multiple responses. My first impression is that the VR headset is a mask and yet, it is an inwards-facing, or rather, an ‘unconscious’ mask. By this, I mean that when we put on a VR headset, we are immersed in a virtual world. We forget the external world and our actions become ‘unconscious’ as we respond to the stimuli within the game or virtual environment (we may wave our arms around in the air and pay no attention to the fact that we may appear silly, for example).

Typically, when we wear a mask, it is to protect, disguise, or hide our identity, or masks are worn to show that we are something we physically ‘put on’. By this, I mean that I wear my ‘professional mask’ at work—a persona that is appropriate to the environment. Conversely, at home, I feel no need to mask myself, perform or adopt any persona since I am in my personal space; my safe space. Masks and masking reveal to us that we are conscious of our actions and interactions. Therefore, while the VR headset may fit the criteria for a mask in that it covers the face, even if only partially, it is not worn for the same purposes that masks are traditionally worn. I, therefore, consider it quite different. As we increasingly engage with new forms of technology—including virtual worlds—I believe VR will improve, and we will see it incorporated into an increasing amount of activity (retail, interior design, skills development, etc). Perhaps then will it become more of a form of consciousness masking.

E.M.: Could you please tell the story of any mask (or type of mask) that particularly interests you?

L.B.: What a lovely question! You may know that I am obsessed with masks and there are so many that I find particularly fascinating. I may offer a couple of examples as a way to demonstrate how masks have long occupied my imagination.

I have always been intrigued by the seventeenth-century Plague Doctor masks which appear bird-like and were stuffed with herbs and spices, along with a treacle-like substance to ward off ‘miasma’ (bad smells which were believed at the time to carry disease). I can only imagine how horrifying it would have been to see the Plague Doctor walking the streets in the seventeenth century. It would have signaled a sure sign that death lingered not far away.

Second, my interest in fashion masks grows as more and more designers use them in their collections. I have been collecting images of fashion masks for about ten years. There are so many designers creating them now, however, in my forthcoming book Masks in Fashion and Popular Culture: Anonymity, Empowerment and Identity (Bloomsbury, 2023), I will be focusing on a few designers or fashion houses in particular—Walter Van Beirendonck, Jun Takashi, Givenchy, Martin Margiela and Gareth Pugh among them. For me, fashion masks amplify the fantasy element of haute couture.

Finally, as we discussed above, I am intrigued by the creative potential of digital masking. So many of us already do this when we choose a filter for our image, however, with new technology such as deep fake, it will be interesting to watch as the possibilities and conflicts arise through its application.

E.M.: Thank you!
Art&Science is an essentially interdisciplinary phenomenon, and each of the components supplies its own methods of work.

Such performativity is an excellent metaphor for a flow, which various simultaneously interacting agents are immersed in. If we see the focus on the interaction between living and not living, artificial and natural subjects as the main feature of trans-humanist topology, then yes, we can call Stelarc's project trans-humanist.

D.D.: You mentioned Stelarc in your lecture, don't you think he is more of a trans- than a post-humanist?
D.B.: I talked about Stelarc's project Prosthetic Head — we showed it at the exhibition Dreaming of Science, which I curated at the Contemporary Art Center Winzavod in Moscow. This work, I would say, clearly illustrates that Stelarc's research is evolving and not living, artificial and natural subjects as the main feature of trans-humanist topology, then yes, we can call Stelarc's project trans-humanist.

D.D.: In this regard, do you think there is now a struggle between trans- and post-humanists in Art&Science, and if so, what is this about?
D.B.: For contemporary trans-humanist tendencies, we can trace several paths of development. The first is concerned with artificial intelligence within the framework of the anthropomorphic paradigm. We have already mentioned dialogic systems. The extreme case of an anthropomorphic system is something pseudo-human, from pets (like Aibo dogs) to human-like robots. Another direction is developing anthropocentric or partially anthropocentric systems. This field comprises various forms of interaction between beings and robots. The next level is opposition to anthropomorphism and anthropocentrism. This approach is usually called misanthropism. Misanthropy views humanity as existing in an incipient — a mistake, or perhaps simply as something insignificant. Here we are already in the domain of deep media studies, which explore the impact of the physical component who have a scientific background. Or groups consisting of artists and scientists who have become aware of the non-utilitarian aspects of scientific research. In contemporary art, you also quite often come across works by highly qualified scientists. For instance, Adrian David Cheok from Singapore accompanies each research paper with an art project, and takes part in contemporary art festivals. Ken Goldberg, a famous American scientist, was awarded for his research in the field of artificial intelligence, is involved in art projects, writes scripts and books. His works have been exhibited at the Venice Biennale, and are present in the collections of the Centre Pompidou and ZKM Center for Art and Media. Such examples are plentiful. What's more, scientists are good at understanding the specific features of contemporary art, and their works tend to be really interesting.
I consider the current crisis — the Covid-19 pandemic — as an opportunity to revise our relationship with the world around us. This includes the field of cultural production.

(a protein) and gem, a non-protein pigment containing iron. This work is precisely about iron. Jonsson signed an agreement with maternity hospitals, which allowed her to collect 40 kilos of placenta, which she then dried. Using old equipment for smelting — a furnace, and anvil, etc — Jonsson forged an iron compass needle from placenta. The artist points to the idea of material resource and its ability to navigate us in our lives. That’s what the metaphor of the compass stands for. As we can observe, ‘deep media’ offer rather a complicated assemblage of ‘human’ and ‘non-human’. ‘Deep media’ art can take different forms. Sometimes it includes technical objects and devices, like the sound appliance on human neurotic substrate by Australian artist Guy Ben-Ary, or the optical system developed by Ralf Becker, a German artist. The functioning of this system is attuned to the Earth’s magnetic field. It is impossible to imagine such projects without high technology. There might be transitional forms, such as re-enactment of the well-known experiments aimed at the reconstruction of prehistoric Earth’s atmosphere by Adam Brown (USA), or online storytelling by Dutch artist Floris Kaaky. All these works question anthropocentric optics, which shows matter as a passive and dumb force.

D.B.: Now for a broad question on the role of the human in the post-human era, and a more specific one, which is about you personally: how do you perceive your role as a (human) curator in the post-humanistic era?

D.B.: I consider the current crisis — the Covid-19 pandemic — as an opportunity to revise our relationship with the world around us. This includes the field of cultural production. This relationship is based on a tradition which reproduces all the patterns and templates of the Enlightenment era. This tradition understands ‘living’ as distinct from ‘unliving’, and the human being as the only creature superior to the whole world. This means we are allowed to change the world according to our purposes. Such a ‘patriarchal’ attitude seems very archaic nowadays, however. In practice, it results not only in the degradation of the environment, but also in an inevitable reorientation of the human world. Does ‘human’ and ‘non-human’ are symmetrically involved in the flow of connections. Such an approach would produce a reality where autonomy, free choice and creativity are no longer considered specifically human characteristics.

In other words, we’re talking about attempts to overcome anthropocentrism and to perceive multiple entities around us — bacteria, algorithms, crystalline structures, electric fields — as subjects acting within a certain framework of relations. Our strategies should become more complex, and our models of individual and institutional creative activity, more flexible. Art as research, the discovery of new tools, a turning to knowledge formats to interpret reality — such could be the potential results of art overcoming its own boundaries after the crisis. But is art capable of providing us with such an image of equal dialogue between humanity and the world? Will we be able to further move from trans-humanist metaphors of total interconnection between people and objects, to reflections on topological instances of ‘external’, ‘non-human’ life? And, as opposed to Descartes, who viewed thought as an inner ‘quality’ of consciousness, to talk about extrinsic thought belonging to the category of prima materia? Isn’t this the basic substrate which can be considered the unit of action? These are the questions which we — artists, curators, art theorists — should be trying to answer.

D.B.: Which recent Art&Science projects do you consider the most interesting?

D.B.: As for recent projects, I was quite impressed by the cooperation of British feminist artist Charlotte Jarvis and scientists from Leiden University Medical Center. The project is called In Posse, which in Latin means ‘before we are born’. Jarvis and her colleagues made so-called ‘female sperm’ using CRISPR gene editing. This method allows scientists to modify DNA inside cells. Research work in these domains has been awarded the Nobel Prize — in Biomedicine in 2012, and in Chemistry in 2020 respectively. Analysing the potential of new technologies which make it possible to transform and create anything from anything, on the basis of this example, we face a situation when the distinction between elements of living matter becomes redundant. This disappearance of distinction, whether on the level of physical body or cultural sign, tells us that our bodies are open in the frame of their contour, and that their outward stability is but a temporarily restrained movement.
Christl Baur is the head of the Ars Electronica Festival, researcher with an interdisciplinary background in art history, cultural management, and natural science. She is particularly interested in the conjunction of aesthetic and social practices that center on collaboration and experimentation and challenge dominant social, political, and economic protocols. Her research field encompasses topics such as video art, new media technologies, computer, biotechnology and interactive art, and she works at the nexus of art & science. Christl Baur participated in the ‘Art and Technology Trends in a Pandemic Reality’ round table which took place at the ‘Future Human’ Track of the DVHG Conference.

Interview conducted by Petr Skvorodnikov

‘2020 as a Turning Point’

Christl Baur: “2020 as a turning point”

P.S.: How do you see the role of digitalized interactivity in Ars Electronica festival?

C.B.: It is undeniable that technology has become an indispensable part of the artistic canon today, especially in the world of media art. The number of artists that work in this field is ever growing, and with it, the diversity of topics and works produced. We are excited that the new developments are different from the classical approaches of human-machine interaction. In 2020, our ideas about interactivity are no longer linked to specific mediums. As a result of the global pandemic, the meaning of interactivity has been challenged, and our understanding of the relationship between humanity, nature and the machine has deepened, facilitating more profound discussions about humanity in an age of uncertainty. Within the festival as well as the artistic practices of Ars Electronica, digitalized interactivity has been an important tool for many years, and the Ars Electronica Futurelab has been developing projects like ‘Tug of War’ that allows interaction beyond the physical boundaries. Now that we have started to think what interactivity can mean for hybrid events such as the festival, digital tools are of absolute necessity.

P.S.: 2020 has become a turning point for organizing events. Do you think that in the future, most events will have an interactive part on the web?

C.B.: Indeed, 2020 was a turning point not just for festivals and events, but for everyone and every profession. For Ars Electronica and our festival it was essential to not dive into the network and disappear there, but to emerge from the network and manifest our programs in many places around the world, distributed and networked.

As the first ever distributed Ars Electronica Festival since its inception in 1979, it was fantastic to see how many of our partners followed our idea and realized in their local spaces diverse programmes dedicated to their community. This showed the interest and need for events happening not despite, but because of, the pandemic. The festival turned even more into a platform, allowing our partners to showcase their programmes. Online interactivity thereby became an essential part of the festival, as it allows visitors and participants from around the world to interact with individuals and communities distributed through all continents and the 160 partnering cities. The urge to rethink travelling in times of climate crisis, this certainly can turn into a more sustainable approach when thinking about a new concept for events. At the same time, as mentioned before, it is important to not only create events online, but to turn them into a hybrid programme, that allows online as well as physical interaction as the challenge stays the same, how can we create meaningful true interaction that reflects our nature and need for exchange.

P.S.: What was difficult or impossible to create in the virtual space of the festival?

C.B.: In April 2020, as we started to think about the form this year’s festival could take, it was immediately clear that we would like to allow a spontaneous exchange between our audiences, something that would allow us to reimagine chats...
with people we haven’t yet met, such as could happen when you sit in a coffee shop, or at the counter of a bar. After trying to create our own platform, we went with several existing ones, such as Mozilla Hubs, that would allow us to recreate this wonderful feeling of exchange beyond scheduled meet- ings. It turned out pretty quickly that there are still many limitations to such platforms, like the number of people within one space, the hardware and knowledge barriers when using such technologies as well as the large amount of people you need in order to facilitate an exchange amongst the visitors. We successfully built a wonderful creative festival space with- in Mozilla Hubs together with our partners, but underestimated how much support the platform would require during the festival. However, hearing stories from spontaneous dance parties, fantastic guided tours through virtual exhibitions and late night meet-ups of the Prix Ars Electronica winners, I would say we’ve managed to create a tool that has been used as a meeting space this year, but still has room for improve- ment for the next event.

P.S.: Do you see the online part of the festival as a part for those who cannot attend offline?

C.B.: The Ars Electronica Festival became a journey, a journey through ‘Kepler’s Gardens’. A journey through the networked biotopes and ecosystems, in which people all over the world are working to develop and shape our future, and in these days that means above all working to save our future. A jour- ney to, and with, many, committed communities that have al- ready begun not only to think about the current problems, but to work on concrete ideas, actions and solutions. Places, initia- tives and institutions where artists and scientists work together, challenge society and try out new alliances and forms of co- operation. The necessary step to move into the virtual space turned into an opportunity for the Ars Electronica Festival to re- invent itself once again. Rethinking every step that we took so far and considering aspects of hybridity are key to our projects and programmes to come. This naturally allows global audi- ences to participate in all our events, and inspires us to target audiences that we couldn’t reach until now, as well as offering opportunities for the ones that couldn’t yet visit in person.

P.S.: Have you felt that any tools for organizing an online festival were lacking?

C.B.: With this simultaneity and duality of local-physical and globally networked events, the Ars Electronica Festival be- came once again an exciting experimental laboratory and proto- type for next-level networking that focused primarily on new forms and possibilities of fusion and coexistence of analog and digital, real and virtual, physical and telematic proximity. As we’ve experienced it in the last decades, online technologies certainly helped the advancement of globaliza- tion through quick and easy ways to connect, inform and ex- change. Now that we are living amidst the pandemic, I think it is more a question of how online technologies can help us to support the regional and foster an exchange globally. It is especially about questioning the tools and habits that we’ve come to adopt so easily and thinking about both sides of the coin, the advantages but also the consequences that follow along. Now it is time to think about our role in the digital world, focusing on us and our desires, not on technology and its ca- pabilities. It is about our needs, our values and our self-image as digital citizens, and how technology can assist us in reach- ing those goals. Art is a catalyst for shaping a better future so- ciety, and I believe that art and artistic thinking is the best way to understand complex issues and systems needed by hu- mankind — be they societal, economic, political, or techno- logical. Art holds the power to scrutinize existing beliefs, cast doubt as creative questions on common perceptions and find ways to think outside the box. This is why I believe that artists hold the keys in their hands to help us to humanize technology and to show us ways into our future.

P.S.: Don’t you think that massive use of network technologies and interactivity will make us consider such works as part of network art (Inter- net art)?

C.B.: With galleries and museums closed and most social in- teractions and cultural experiences moved online, it seems that this could be the revival of network art. Online spaces suddenly seemed valuable again to not only showcase works, but also to interact with potential audiences. Although moving online seems to be a possible solution, I believe that we have enough reason to not disappear in the net, but much more think about hybrid models that allow us to connect to physi- cal each other, a statement for science and art, not only as a fuel for the economy, but as the basis for culture and civili- zation. With this target in mind, we tried to implement sev- eral tools that would help us to interact in many different ways, such as watching contents via the four channels, participat- ing in workshops or online guided tours, meeting fellow partic- ipants in the virtual space of Mozilla Hubs, or interacting with others in chats on our social media channels. The more di- verse the ways, the more difficult it gets to initiate active ex- change, and the challenge remains of how can we maintain those festival moments that inspire people to plan their vis- its to festivals? How can we create even more engagement and connection between our visitors and participants, allow- ing them to exchange without the barriers that technical tools often come with? This of course also leads to the question of a more qualitative exchange, meaning how can we allow the activation of our other senses, such as touch, smell and taste to be integrated into the hybrid festival experience? Here, we certainly still lack the technology to do so.

P.S.: Do you think online technologies will lead to more intense globalization?

C.B.: As we’ve experienced it in the last decades, online technologies certainly helped the advancement of globaliza- tion through quick and easy ways to connect, inform and ex- change. Now that we are living amidst the pandemic, I think it is more a question of how online technologies can help us to support the regional and foster an exchange globally. It is especially about questioning the tools and habits that we’ve come to adopt so easily and thinking about both sides of the coin, the advantages but also the consequences that follow along. Now it is time to think about our role in the digital world, focusing on us and our desires, not on technology and its ca- pabilities. It is about our needs, our values and our self-image as digital citizens, and how technology can assist us in reach- ing those goals. Art is a catalyst for shaping a better future so- ciety, and I believe that art and artistic thinking is the best way to understand complex issues and systems needed by hu- mankind — be they societal, economic, political, or techno- logical. Art holds the power to scrutinize existing beliefs, cast doubt as creative questions on common perceptions and find ways to think outside the box. This is why I believe that artists hold the keys in their hands to help us to humanize technology and to show us ways into our future.

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ways of seeing what the role of art can be for the benefit of society. I’m curious to see where this takes us in the coming months, and what wonderful creative ideas and actions artists will coin to critically ask questions and work on solutions for our current problems.

The ‘Design: Vertical & Horizontal Growth’ ended with screening of the ‘Non-Player Piano’ sound performance that was created specifically for Ars Electronica Festival 2020. Andriesh Gandrabur, the curator of the project, head of the “Sound art and sound design” department at HSE University, spoke to us about the project, music, Ai, and the prospects for online technologies in the future.

Andriesh Gandrabur: “Non-Player Piano” Sound Performance

Interview conducted by Petr Skovorodnikov, PhD student, HSE University
P.S.: One of the major festival research topics was artificial intelligence and its connection with music. How did you manage to build a connection between music and AI in your project? What difficulties did you face?
A.G.: The main challenge was to find a way how everything should work together. We wanted to combine two languages — technological and musical. As a starting point, we decided to ask professional musicians to improvise with AI. We approached the developers of the Mubert AI application. Music is loaded into Mubert’s neural network with separate elements, that is, musical phrases, tagged and divided into musical instruments. The app analyzes what the audience likes and dislikes, based on a large amount of data, and creates unique soundscapes. We also used software that synthesized sounds depending on our geodata, air temperature, wind, and so on. We received the weather data from the Internet, and geodata was obtained by sailing on a boat along the Moscow River. However, we didn’t want to focus on technology only but rather aimed to use musical language to bring us back to using technology in the form of musical art to get involved in musical performance.

Speaking of difficulties, we did not plan properly around the daylight hours: first, we waited for the boat, then we spent a long time checking the sound, we could not immediately figure out the new sound system. It was already getting dark when we were ready. We were somewhat upset and began to fall into a mystical state, but then a large house with a huge number of lights appeared on the horizon, and the artificial intelligence and modular system reacted to this. It was the moment when everything changed dramatically from a mystical silence to a feast of electricity. This beautiful moment became a culmination of the performance.

P.S.: How important was artificial intelligence in the performance? Who was the main conductor of the performance: artificial intelligence or the musicians?
A.G.: During the performance, we started from what the neural network offered us, which was stylistically limited by the developers. The program defined harmony, tempo, and rhythm. That is, the musicians could not change the harmony, it was chosen by artificial intelligence. Our music depended on a neural network. We had two vocalists with us, whose vocals were processed and depended on geodata and the weather. We also had a modular system that we came up with specifically for this performance. We put a video camera on the bow of the boat to record the movement of the boat. A computer program converted color and light from a video camera image into analogue signals using an electrical protocol for a modular synthesizer controlled by a human. The result is a generative noise machine controlled by humans, but not completely. Nature, landscape, and humans complemented each other. I like it when there is a balance between technology and humans.

P.S.: Could one designate 2020 as a turning point, so in the future most events and performances will have a network component?
A.G.: Yes, of course, social events will have an online part. 2020 became a turning point in the perception of information. Before, people were afraid of online events. Just like recording sound changed all music in its time. This year is a turning point in the perception of information.

P.S.: What are the prospects for growth of the role of interactivity in performances aimed at online audiences?
A.G.: I bet on engaging the viewer, I am more interested in interactive exhibitions and films, in which the viewer can influence the course of events.

I think the future belongs to gamification when games will not be just entertainment but will be a part of everything.

P.S.: Do you think the massive use of network technologies and interactivity will lead us to consider such works part of online art?
A.G.: I don’t think this will be a noticeable transition for people. It is more important for curators and critics to segment art. People come to an exhibition and do not divide art into narrative or technological. True, there are online galleries and exhibitions that can only take place on the Internet. I really liked the Google project, when you could send a picture, and a robot drew it somewhere in the sand. I think there will be more such projects. We need to create such sites.

P.S.: The role of networked art and, in particular, networked music has grown significantly this year, what are the prospects for this trend in the future?
A.G.: Nowadays, the trend is to create comfortable spaces on the Internet. Zoom became popular because it is convenient as a space for organizing online meetings. It is necessary to analyze what spaces artists and spectators will need, it will probably be something related to VR. The one who gets it right will succeed.
Abstract
Recent technological developments have geared humans with profound opportunities to shape better futures. Although these advancements might seem astounding, they might also have serious ethical implications and societal consequences. The aim of this paper is to situate and connect design with the topical philosophical discussions about the future of humanity. In this paper, I problematize the relationship between humans and technological futures. I give a short account on the ethical implications of emerging technologies. I also discuss how humans are dealing with a post-anthropocentric future of multispecies, other critters and possibly other human species. Furthermore, I highlight the role of design practice as an aiding agent and catalyst in shaping better futures. The paper attempts to position critical, discursive and speculative design practices as fundamental tools in designing technological futures.

Keywords: Design Futures, Speculative design, Anthropocentrism, Technology.

“See You in Zoom”: Digitally Extended Presence as a New Normal
TATIANA FADEeva
HSE University, Associate Professor: Faculty of Communications, Media, and Design / HSE Art and Design School
fađeva.ifice@hse.ru

ALEXANDRA STARUSIEVA-PERSHEeva
HSE University, Associate Professor: Faculty of Communications, Media, and Design / HSE Art and Design School
apersheeva@hse.ru

Abstract
The 2020 Lockdown has forced grand institutions (from British House of Commons to Venice biennale) as well as business and individuals to transfer their activities almost entirely into the web. Digital presence, which a year before would hardly qualify as a presence at all, in 2020 has become legitimate, officially approved and mutually agreed upon.

Our report focuses on specific traits of contemporary digital embodiment, online dialogue and combined meetings that take part in “real life” and conference apps simultaneously.

We argue that digitally extended communication — which has long ago been described in science fiction — is now taking shape due not to a burst of technology but a change in social conventions established during the period of pandemic and has become the calling up an update in logistics, project management, education process, etiquette etc.

We aim to examine the change in spheres of art, design and humanitarian education in order to outline features of digitalized presence and Zoom-mediated communication. The challenge is to seize the look of “new normal” and to reflect upon its consequences.

Keywords: Lockdown, Media communications, Museum, Virtual reality, Corporeality, Presence, Digital art, Contemporary art, Cultural industry, Media design, Exposition design.

Satirical Jewelry Design for Feminist Perspectives in Augmentation
KELLIE WALTERS
Garmin International
kelliekaydesign@gmail.com

Abstract
Satirical design of an augmented jewelry piece is now taking shape due not to a burst of technology but a change in social conventions. This project does not pose a solution to minimal critical considerations in augmentation, but instead stresses the importance of critical satirical design of an augmented jewelry piece designed with a theoretical base and ethical considerations if these gaps present in AI development. This project does not pose a solution to critical considerations in augmentation, but instead stresses the importance of critical satirical design of an augmented jewelry piece designed with a theoretical base and ethical considerations if these gaps present in AI development.

Keywords: Feminism, Artificial Intelligence, Satirical Design, Augmentation, Design Theory.

The Return of Avatar as Ever-changing Postdigital Identity
ALEXANDER ZHURAVLEV
HSE University, Faculty of Communications, Media, and Design / HSE Art and Design School
design@hse.ru

Abstract
The world of social networks and instant messengers providing round-the-clock communication of users was preceded by a phenomenon of avatar, without which it would be inconceivable. The text covers the evolution of user’s notion of virtual body, the main quality of the virtual environment — making everything possible — gradually inspired increasing rate of changes of avatars and experiments with users’ appearance using masks and applications. Ever-changing state of virtual body has a lot in common with a concept of body without organs and expresses itself beyond mimeticism. Recent activity of Instagram and Youtube users show the way non-mimetic virtual world can be constructed deriving from the virtual body.

Keywords: Dentity, Technology, Avatar, Post-digital, Instagram, Corporeality, Virtual, Body without organs.
For over two decades the term ‘creative industry’ has been widely used to designate an ever growing diversity of economic activities. Creativity as such is an essential human feature necessary for inspiring innovative development of every industry and science. Should design be a universal instrument capable of embracing the whole range of human activities, or should it just focus on ‘creative industries’ as they are defined today? How does the project oriented approach of the industry influence design thinking? And what should contemporary art and design schools be teaching?
29th
of October
SpbSTU Day:
“CREATIVE
INDUSTRY”

11:00–11:15 Opening of the Conference: Eija Salmi (Cumulus Association), Igorii Svetnik and Alexander Kobyshev (Peter’s the Great Saint-Petersburg Polytechnic University, Russia)

Plenary Session

11:20–11:40 Michael Krohn (Zurich University of the Arts, Switzerland): “Shifting Design Education Towards Creative Industries?”

11:40–12:00 Ksenia Diodorova (co-founder and art director of bureau Gonzo Design, Russia): “Design As a Tool for Humanism”

12:00–12:20 Henrique Pessoa (professional Landscape Architect, Politecnico di Milano, Italy): “Creative Landscape?”

12:20–13:00 Panel Discussion with Keynote Speakers. Moderator Vikenty Gryaznov (Associate Professor of the Industrial design department at Stieglitz academy of Art & Design Creative director at Gryaznovdesign)

Papers Presentation, discussions

13:00–15:30 Papers Presentation, discussions
Round Table: “Design — New Other Communication Language”

Michael Krohn
Zurich University of the Arts, Switzerland,

Ksenia Diodorova
(co-founder and art director of bureau Gonzo Design, Russia)

Henrique Pessoa Pereira Alves
(Professional Landscape Architect, Politecnico di Milano, Italy)

Review by Vikenty Gryaznov

Will 2020 be seen by design historians as the beginning of a new era of design? That was the key question of the online conference, which was never voiced, but was clearly a refrain of every speaker. The result of many reports and discussions on the vertical and horizontal growth of design was the key conclusion: the era of the twentieth century is over, finally, 20 years later, the twenty-first century has come, with different goals, interests and needs, where human interests are at the center. The Internet, social networks and services have made every person who uses them as actors and stakeholders of all processes at once anywhere in the world where there is Internet. The free movement of meanings became the basis of a new culture. The Internet of Things has degenerated into a new paradigm.

Whether this is the dawn of the postmodern era, or is it already post post modernism, we will be able to answer after a while, but it is already clear that companies, corporations do not sell a product (services) as such, but what it carries with it is history, empathy, interest, tolerance, freedom, relationships, connections, etc. That is, in fact, activators of emotions that accompany a product or service.

The creative industry every year is becoming more extensive and profound, not only from the side of needs, but also from the side of creating new connections between people — people, people — society, people — corporations. Therefore, the technology discussed in the context of the conference becomes not only the basis for new emotions, but also a catalyst for processes. Marketing, engineering, sociology will continue to merge with design within the creative industry. And of course an important question arises here: who learns from whom? Students for teachers, companies for consumers, or marketers for designers, etc. We can confidently say that today interdisciplinary interaction no longer depends on the industry or the location of the person. This is a banal but logical path that has entered the stage of its heyday.
Heart Ring – A Set of Stackable Rings Integrated with Chinese Culture and Western Aesthetics

ELLEN ZHU
Visual Communication Department, Tsinghua University, China
lenzhu@hotmail.com

Abstract
The current Chinese design lacks good ideas and design methods that can integrate Chinese and foreign cultures in the communication of Chinese voice, the understanding and acceptance of Chinese culture by international audiences is not accurate enough, which is one of the reasons that Chinese culture cannot effectively generate emotional resonance on the international stage through design. Suppose Chinese culture wants to adapt to this era of globalization more quickly. In that case, it needs to combine art and design, attract and impress international audiences, expound on the development of Chinese culture with cultural integration. This paper takes “Heart Ring”, a set of rings of Chinese characters, as an example to discuss the creation research of the combination of Chinese character culture and Western aesthetics.

Keywords: Chinese characters, Cross-cultural, Ring design, Chinese character ring.
Natural Maintenance
TIMOTHY KAROLEFF
University of Louisiana at Lafayette
timothy.karoleff@louisiana.edu

Proceedings of the online conference, page 34

Abstract
This short essay seeks to explore the spheres of influence on human creativity connoted as natural and artificial, and how these framings of ideology are an institutional construct to limit the imaginative capabilities of individuals and society as a whole, in order to maintain status quo power relationships. By assessing the relativity of perception that is core to these propositions, inseparabilities are reformed as points of friction ripe for engagement by designers seeking to craft more equitable futures through the political efficacy of design. Mindfulness and stillness are put forth as lines of flight to iterate the potential of ideology-crafting available through the processes of design thinking in order to encourage more equitable actions resulting in challenges to presented realities in the form of post-human/post-nature narratives.

Keywords: Natural, Artificial, Stillness, Equitable, Design.

Reflexive Culture in Architectural Science and Education
IRINA TARASOVA
Dean, Department of Architecture, Ud State University of Architecture and Art, Dzierżno, Poland
alexandra@russiamt.ru
EKATERINA KOLENKOVA
Vice-Dean, Department of Architecture, Ud State University of Architecture and Art, Dzierżno, Russia
alena-71@mail.ru

Proceedings of the online conference, page 37

Abstract
The objective of the paper is to define the specifics of reflexive culture in architecture science and education. Current relevance. The need to address reflexive culture is dictated by the following reasons: first, the need to find common grounds between architectural science and architectural education, which still exist separately in Russian architectural education practice; second, the development of online technologies, which compel to reconsider the architectural design teaching process; and, third, the need to introduce the notion of «architectural pedagogy» into architectural science and higher learning pedagogy. Research methods. The paper reviews research publications on reflexive culture, project method, critical thinking and reflexive learning in architecture and art education. Conclusions. Reflexive culture is an important constituent part of architect’s professional culture. The category of reflexive culture may serve as a channel for introducing the achievements of higher learning pedagogy into architectural education and architectural science. The paper appreciates the potential of reflexive culture for architectural science and architecture and art education.

Keywords: Reflexive culture, Architectural science, Architectural education.

Idea Generation and Ideation.
MICHAEL DUSTAMANOLAKIS
Manchester Metropolitan University, Manchester, UK
michael.dustamanolakis@mmu.ac.uk
17900682r@connect.polyu.hk

Proceedings of the online conference, page 40

Abstract
Idea generation is sometimes being used interchangeably with the same meaning as ‘idea generation’, and some other times it is not. While this is not a significantly major problem, it worth noting that because of it, literature can lack clarity at times, being unclear what it is being meant. The author claims that these two terms are not synonymous, as idea generation refers to the production of ideas. In contrast, ideation refers to two concepts simultaneously, (a) the production of ideas as well as (b) evaluating and making a decision on which ideas to be processed further.

Keywords: Idea generation, Design education, Ideation, Creativity.

Design in the Digital Era: the Balance Between Technology, Creativity and Culture
MARGHERITA TUFARELLI
University of Florence, Italy
margherita.tufarelli@unifi.it
ELISABETTA CIANFANELLI
University of Florence, Italy
elisabetta.cianfanelli@unifi.it
MARIA CLAUDIA COPPOLA
University of Florence, Italy
mariaclaudia.coppola@unifi.it

Proceedings of the online conference, page 43

Abstract
The contribution aims to reflect on the impact of digital transformation in the production of cultural and creative content. Design assumes a significant role within this scenario, as it has always been a link between technology, market and society. Precisely, the Made in Italy sector embodies the synthesis of culture, creativity and technology, in which design unfolds an articulated system of values deeply rooted in the economic, social and cultural values.

The paper will address the role of design in the ecosystem that sees the production of cultural and creative content. The Italian design culture, Digital transformation, Manufacturing, Cultural and creative industries, Design in the Digital Era: the Balance Between Technology, Creativity and Culture.
The 4th year Bachelor degree student, Educational program ‘Graphic Design’

YULIA ILINYKH
Applied Arts).

EGOR VASILIEV
PhD Candidate, Centre for Design Innovation

MENGJIE HUANG
PhD Candidate, Centre for Design Innovation

NIKOLAY BORISOV
PhD Candidate and Research Assistant

MARIA KUPTSOVA
PhD Candidate, Centre for Urban Transformations, FHAD, Swinburne University of Technology, Melbourne, Australia

BUZULEE ANYA
PhD Candidate, Centre for Design Innovation

ELENORA GLIUNOYKA
Head of the Department of Advertising, St Petersburg University, Deputy of Art history, professor. Member of the Union of Artists of Russia

ANNA YERIVANOV
PhD in History of Arts, Associate Professor, Department of Design, St Petersburg University, Member of the Union of Designers of Russia

TATIANA ALEKSANDROVA
Senior Lecturer, Department of Design, St Petersburg University, Deputy Head of DESIS SPbU Design Laboratory

MARIA ZOLOTOTOVA
PhD in Product Design PhD, Lecturer at the Department of Architecture and Design JUTU (PK)

KORSHENIN STARTSEV
Associate Professor, Department of Design, St Petersburg University, Member of the Union of Designers of Russia, Member of the Union of Artists of Russia

ELEKTRA VALTELLA
PhD in Art, Associate Professor of Saint Petersburg University, Internationalization of Art Critics (AICA, LAMBDA)

NICKY BOSCH
Doctor Phys.-Math. Sci., Professor. Head of the Department of Information Systems in Art anthologies, St Petersburg University

NINA RUSANAVA
PhD in Sociology, Associate Professor, Head of the Sociological Clinic for Applied Research. St Petersburg University

KONSTANTIN STARTSEV
Scientific Committee Member of the Union of Designers of Russia

GIANNI DENARO
PhD, Post-doc Researcher, Department of Planning, Design, Technology of Architecture, Sapienza University of Rome, Italy

VIKTOR MALARUCZ
PhD, Post-doc Researcher, Department of Planning, Design, Technology of Architecture, Sapienza University of Rome, Italy

MARIA KUPTSOVA
PhD Candidate, Centre for Urban Transformations, FHAD, Swinburne University of Technology, Melbourne, Australia

BASMA ANASATAS, BUKHELWA AWR, CHOONGHEE ARIA, CHONGHUI LEE, GORZIGNA MARIA, SUSHIMA KAWE, LAU-DAR-CHAN WYONG, MARYANNA BOLSHAYA, NAEIMNA SOFA, NESTJEMENI MANTE, NESTERKINA ANA, SOKOLSKA STEFANIA, WUHCHY YULLA.

CHERNYSHEVA ANYA, DRUNCHENKO LARISA, MATYZHEVAEKATERINA, NASIMOVA SOFA, UBACHEVA VARRAGA.

NASIMOVA SOFA
PhD Candidate, Centre for Design Innovation

MAYA RUSANAVA
PhD in Sociology, Associate Professor, Head of the Sociological Clinic for Applied Research. St Petersburg University

TIATIANA ALEKSANDROVA
Senior Lecturer, Department of Design, St Petersburg University, Deputy Head of DESIS SPbU Design Laboratory

MATYZHEVA EKATERINA
PhD Candidate, Synthetic Landscape Lab at ITMO, St Petersburg, Russia, PhD Candidate, Synthetic Landscape Lab at ITMO: IMERIO, IMERIO, Australia

ANGELA GIAMBRATISTA
PhD, Research Fellow, Department of Planning, Design, Technology of Architecture, Sapienza University of Rome, Italy

NARAN MELLES
PhD Candidate, Sapienza University of Technology, Centre for Design Innovation

DIANA GRADUSOVA
Deputy of Art history, professor. Member of the Union of Artists of Russia

VILLA VALENTINE
PhD Candidate, Critec, ITMO, St Petersburg, Russia, PhD Candidate, Centre for Urban Transformations, FHAD, Swinburne University of Technology, Melbourne, Australia

VIKTOR MALARUCZ
PhD, Post-doc Researcher, Department of Planning, Design, Technology of Architecture, Sapienza University of Rome, Italy

MARIA KUPTSOVA
Creative Initiative Program Lead at, ITMO, St Petersburg, Russia, PhD Candidate, Synthetic Landscape Lab at ITMO: IMERIO, IMERIO, Australia

INTER-ACTION

The 4th year Bachelor degree student, Educational program ‘Graphic Design’

EKATERINA VASILEVA
PhD in Art, Associate Professor of Saint Petersburg University, Internationalization of Art Critics (AICA, LAMBDA)

NIKOLAY BORISOV
Doctor Phys.-Math. Sci., Professor. Head of the Department of Information Systems in Art anthologies, St Petersburg University

PROF. JURE PAPY
Stemorere University of Technology, Centre for Design Innovation

ANGELA GIAMBRATISTA
PhD, Research Fellow, Department of Planning, Design, Technology of Architecture, Sapienza University of Rome, Italy

NIKOLAY BORISOV
PhD Candidate, Faculty of Health, Arts and Design, Sint-Anna University of Technology, Melbourne, Australia

MAYA RUSANAVA
PhD in Sociology, Associate Professor, Head of the Sociological Clinic for Applied Research. St Petersburg University

YULIA ILINYKH
Applied Arts).

EGOR VASILIEV
PhD Candidate, Centre for Urban Transformations, FHAD, Swinburne University of Technology, Melbourne, Australia

NIKOLAY BORISOV
PhD Candidate and Research Assistant

MARIA KUPTSOVA
PhD Candidate, Centre for Urban Transformations, FHAD, Swinburne University of Technology, Melbourne, Australia

BASMA ANASATAS, BUKHELWA AWR, CHOONGHEE ARIA, CHONGHUI LEE, GORZIGNA MARIA, SUSHIMA KAWE, LAU-DAR-CHAN WYONG, MARYANNA BOLSHAYA, NAEIMNA SOFA, NESTJEMENI MANTE, NESTERKINA ANA, SOKOLSKA STEFANIA, WUHCHY YULLA.

CHERNYSHEVA ANYA, DRUNCHENKO LARISA, MATYZHEVA EKATERINA, NASIMOVA SOFA, BUKHELWA AWR.

NASIMOVA SOFA
PhD Candidate, Centre for Design Innovation

MAYA RUSANAVA
PhD in Sociology, Associate Professor, Head of the Sociological Clinic for Applied Research. St Petersburg University

TIATIANA ALEKSANDROVA
Senior Lecturer, Department of Design, St Petersburg University, Deputy Head of DESIS SPbU Design Laboratory

MARIA ZOLOTOTOVA
PhD in Product Design PhD, Lecturer at the Department of Architecture and Design JUTU (PK)

KORSHENIN STARTSEV
Associate Professor, Department of Design, St Petersburg University, Member of the Union of Designers of Russia, Member of the Union of Artists of Russia

ELEKTRA VALTELLA
PhD in Art, Associate Professor of Saint Petersburg University, Internationalization of Art Critics (AICA, LAMBDA)

NIKOLAY BORISOV
Doctor Phys.-Math. Sci., Professor. Head of the Department of Information Systems in Art anthologies, St Petersburg University

PROF. JURE PAPY
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NIKOLAY BORISOV
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MARIA KUPTSOVA
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CHERNYSHEVA ANYA, DRUNCHENKO LARISA, MATYZHEVA EKATERINA, NASIMOVA SOFA, BUKHELWA AWR.
Morning Session

30th of October
SPbU Day: “INTER-ACTION”

11:30–13:00

Thematic Meeting: papers’ presentation and discussion, special registration required


YIWEN ZHANG (Tongji University. China): “Towards Interactive Approaches for Information Searching in Mixed Reality”

Plenary Session

14:00

Introductory speech by Aleksandra Bobretsova, DVHG moderator, Founder of Inruonline.com

11:20–11:40

ALOK NANDI (Creative director at Architempo. Spread Design): “Transfiction and Beyond: Interactions and Temporalities”

14:50

ANTON POPOVICH (Founder & CTO. HINT Lab) “How AI Will Shift the Design Industry”

15:20

IANA VAVILOVA (Lead UX/UI designer at Dell Technologies) “Complex Systems Design”

15:45

Coffee break

16:00

EGOR KRAFT (Interdisciplinary Artist and Researcher) “Museum of Synthetic History, Algorithmic Prejudices and Automation of the Past”

16:30

LUCY HARDCASTLE (Founder and Creative Director at Lucy Hardcastle Studio) “Immersive Sensuality within the Digital”

17:00

Closing speech Interactive Sessions (run in parallel)

17:30-19:00

IVAN PUZYREV (VR expert and Digital Strategist) “VR Meeting about the Future of VR”

17:30-19:30

DESIS STUDENTS INITIATIVE “Students’ Participation on Social Innovation Networks”

Learn more about “Inter-Action” day on the track’s official website
Possible and Plausible Futures of Interaction

Alok b. Nandi  
Architempo, Spread Design

Anton Popovich  
HINT Lab

Egor Kraft  
Interdisciplinary artist, researcher

Iana Vavilova  
Dell Technologies

Lucy Hardcastle  
Lucy Hardcastle Studio

The Inter-Action day brought together a range of multidisciplinary experts to build a conversation on the crossroads of cutting-edge technologies, artificial intelligence, digital art, user experience, and interaction design. The plenary session has included five speakers with a different perspective and background in the world of interaction mediated by digital technologies to draw plausible developments and foresee possible futures.

Prof. Alok b. Nandi proposed a critical discussion on conflicting constraints in evolving and hybrid contexts, such as the virtual environment. What are the signs and markers that help people navigate there? Multiple media, space, and technologies, high-tech interactive installations, and low-tech mise-en-scène — each of them should have its storytelling and rules of behavior.

Anton Popovich covered Artificial Intelligence issues, such as its potential for learning and creativity, falsification, and monotonous work. To which extent could and should AI be an equal collaborator to a human?

Iana Vavilova, being a practitioner in UX/UI design, shared her experience in building complex interactive systems, particularly pointing out the importance of connections rather than objects in the design practice.

Egor Kraft disclosed his research methodologies in art, where he uses AI to facilitate speculative investigations on historical documents and observe the consequences and the potential of such digital myths.

Lucy Hardcastle has closed the plenary session by providing us with a dive into the visual language she develops for the digital future. Tactility, visual illusions, sensual storytelling, 3D motion, virtual and material forms of visual communication — could these respond to the questions posed by prof. Alok Nandi?

The Interactive Sessions followed the plenary session. Ivan Puzirev organized the dialogue about virtual reality — the most promising and most immersive format for social interaction. The discussion unfolded various issues, among them: the future of immersive virtual spaces, ethics, and social transformation in virtual reality, the architecture of virtual spaces, transformed self-perception in Virtual Reality, and others.

The workshop “Student’s Participation on Social Innovation Networks” organized by the DESIS Students explored the ways of creating a favorable environment for students to connect to and develop social innovation initiatives in the spirit of a collaboration culture.

The experience of this conference has demonstrated to us the relevance of this topic to the variety of disciplines and approaches. The ongoing persistent, creative research forms new rooms for user experience where our knowledge shapes intuition needed for adaptability in these environments.

We sincerely thank our speakers and participants for having this discussion that provided a fruitful ground for the next Cumulus conference to be held in 2022. We look forward to the following collaborative discoveries and interactions, and we are happy to partake in developing a vision of a multiple, flexible, and unpredictable future.
This social enterprise is dedicated to supporting DVHG DIGEST 2020 Conference Digest. As part of a year three bachelor design brief, the rebrand project enabled students to reflect on the values of the organisation. As such, the methodology used a pragmatic paradigm approach and mixed methods design practices in order to understand and use in engagement projects. In this paper, we present a set of principles for planning such workshops, Virtual events, Creative engagement, Design principles. In a timely manner.

**Abstract**

This paper presents a case study of a redesign of a physical workshop into a virtual one to illustrate the application of a set of principles for designing and running co-design online events. Such workshops require a different co-design approach to overcome the challenges of working in spatially distributed settings, such as the lack of audiovisual cues, digital skills and physical presence. This approach involves developing a new design ‘language’ that a community can understand and use in engagement projects. In this paper, we present a set of principles for planning and facilitating online events, and designing interactive resources, and the application of such principles in a redesign process of a conference workshop. The findings from the case study suggest that short-term activities and active facilitation assisted by a technical producer can support the delivery of effective online workshops, enabling participants to achieve desired outcomes in a timely manner.

**Keywords:** Distributed co-design, Online workshops, Virtual events, Creative engagement, Design principles.
Hybrid Housing: Reimagining Shared Urban Living

DIANA VALDÉS
University of Monterrey
diana.valdes@udem.edu

SOFÍA GONZÁLEZ
University of Monterrey
sofia.gonzalez@udem.edu

TAMARA MEDINA
University of Monterrey																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
Proceedings of the online conference in collaboration with Cumulus

Tatiana Rivchun, Liudmila Aliabieva, Natalia Ozerova, Mariia Zolotova (Eds.)

DESIGN: VERTICAL & HORIZONTAL GROWTH
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28.10.2020

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Abstract

Recent technological developments have geared humans with profound opportunities to shape better futures. Although these advancements might seem astounding, they might also have serious ethical implications and societal consequences. The aim of this paper is to situate and connect design with the topical philosophical discussions about the future of humanity. In this paper, I problematize the relationship between humans and technological futures. I give a short account on the ethical implications of emerging technologies. I also discuss how humans are dealing with a post-anthropocentric future of multispecies, other critters and possibly other human species. Furthermore, I highlight the role of design practice as an aiding agent and catalyst in shaping better futures. The paper attempts to position critical, discursive and speculative design practices as fundamental tools in designing technological futures.

Keywords: Design Futures, Speculative design, Anthropocentrism, Technology.

Introduction

In his book “Sapiens: A Brief History of Humankind”, Yuval Noah Harari discusses how homo sapiens have been changing over time. He argues that natural selection gave humans opportunities more than it gave to other organisms. Yet, humans were still limited by their biological and physical limits. Eventually, this is not the situation nowadays. In the twenty-first century the position has changed; humans have gained the opportunity to cross these limits, changing the rules of natural selection by technology-driven intelligent design (Harari, 2014). While writing this paper, Elon Musk; the founder of the neurotechnology company “Neuralink” has unveiled a chip implant that would make it possible to create a real brain-to-machine interface so that humans could communicate with the machines. Inventions like this trigger many questions about what does it mean to be human and what sort of human are we going to be in the future? Does this mean we are about to encounter superhumans with computer-like brains? Or humans that could communicate with signals? would this mean that human mind could be part of a machine or would humans themselves be like machines?

The aim of this paper is to introduce design as a potential practice to explore and design better futures. My attempt is to situate design within the philosophical debates about ethics, technology and future human along with shedding the light on speculative design as a tool to research & examine emerging technologies. In the second section of this paper, I discuss some of the ongoing philosophical debates about the relationship between humans and technology. I give a short account on the anthropocentric theory that shaped our present along with a discussion about how technology of the twenty-first century triggered other movements such as the transhumanism, posthumanism and the Chthuluscene. In the third section, I give a brief account on the relation between ethical frameworks and anthropocentrism then I discuss the implications of the unwise adoption of technology. I follow this by the fourth section where I discuss the role of design in dealing with emerging technologies and why it’s paramount that design should be aware of the technological ethical and social implications. In the fifth section I introduce the critical and discursive practices of design. I follow this by the sixth section where I focus on speculative design as a potential aiding agent and catalyst for designing futures. I conclude this with a brief discussion on speculative design criticism along with a suggestion for potential areas of exploration.

The anthropocentric view of the world

It feels sensible before getting into the details of human relationship with technology to give a short account on anthropocentrism. In environmental ethics, it is defined as “the belief that value is human-centred and that all other beings are means to human ends” (Kopnina et al., 2018). Anthropocentrism refers
to the belief that human being is the central element in exist- ence. Which gives human beings a privileged space or excep- tion. And this is a consequence among others and organisms and entities existing with the same rights and duties. We need the next down a long history of debate and ar- gument by environmental ethicists, sociologists and philoso- phers about human agency to the environmental degradation (Lomask & Smil, 2018). This is needed to include the debate about how humans look at the other-than-human; non-human as well as cohabitating with other organisms wheth- er organic or non-organic. 

In the past three decades, with the rise of awareness move- ments towards the environmental destruction, the anthropocen- tric positions have had rejections and oppositions being referred to as anti anthropocentrism or positions that are more in accord with hu- mans & other beings (Rae, 2014). Donna Haraway argued that humans should shorten down the Anthropocene as much of it is because humans have created the multi-spe- cies living together as “myriad intra-active entities-in-as-semblages including the more-than-human, other-than-human, human, and animal” She calls this the “Chthul- lucene” referring to the relationship between human and oth- er earth critters (Haraway, 2015). There’s a criticism of the an- thropocentric position grounded on the hypothesis that if the non-anthropocentric analysis comes from humans. There- fore, they are some extent based on a degree of anthropo- centricity which is conflicting and confusing (Hayward, 1987)

The next “human”

Indeed, technology has geared humans with extra capa- bilities; whether it’s a medical enhancement, a prosthetic limb or even feeling they are there (Cath et al., 2018; Floridi, 2016). This raises several questions such as what is dignity? and what are rights? and does human rights only count? The concept of human dignity enjoys global acceptance because it is seen as a fundamental right of all human beings. But the de- nial is a subtle confirmation of humans having the highest val- ue because of being human (Lebech, 2004) it is clearly noticed that the discussion about dignity is also coming from an anthro- pocentric perspective, which is problematic when discussing the dignity of other-than-humans.

Implications of ethical frameworks

In this section, I highlight some ethical inquires along with some ex- amples of what might be the implications of the unwise adop- tion of technological development. Transhumanism is usually considered through the lens of relationship with the other-than-human, but cannot be considered as a new species (Sorgner & Raby, 2013). This indirectly contributed to unfavoured implica- tions on the social and environmental levels (Jakobsone, 2017). Despite the an anthropocentric perspective, this is basically an ethical issue which is appealing to human and non-human.

The government-led economic system usually chooses particular paths for technological development. This sort of de- velopment is to design lives both human and animal (Dunne & Raby, 2018). It’s not always easy for designers to take themselves out of this system and to think of other alternatives. So, if design doesn’t know where to go or does go with consum- ing the “only made available” solutions; there might be serious implications arising from the integrated technological develop- ments are usually made desirable for designers to adopt and implement (Auger, 2014). It is obvious that the world around us is changing fundamen- tally and humans and machines are entwined, the machine has gradually become organic and human has partly become machinic (Har- away, 1991). This also be seen in the invisible and unno- ticeable artificial intelligence technologies we rely on daily with- out even feeling they are there (Cath et al., 2018; Floridi, 2016).

Design issues

By the end of the cold war and the fall of Berlin wall; mar- ket-led capitalism has taken over any possible alternative mod- els for societies thus design had only one way to align itself with; and that is to follow the main stream of technology. So, Raby & Raby (2013). This indirectly contributed to unfavoured implica- tions on the social and environmental levels (Jakobsone, 2017). This negatively affected the technological developments as well as ethical and cultural consequences. Design can facilitate the dis- course on advanced research in science and technology as well side (Malpass, 2018). By this, design can follow what Hariri has suggested which is “influencing the direction of scientists” and to respond to enquiry of “what do we want to want? Instead of “what do we want to do?”. Design can follow what Hariri has suggested which is “influencing the direction of scientists” and to respond to enquiry of “what do we want to want? Instead of “what do we want to do?.

This is exactly where design lies as a catalyst between the science lab and the market. That is where the consumer and profit led factors entered the field (Dunne & Raby, 2013), that’s where the cross-discipline research started along with the transdisciplinary change. It’s vital now for humanity, no need to mention par- ticular categories of stakeholders, to act as early as possible and not in a later stage and to stop that market influence which is happeningup taking decisions after it is too late or after mass destructions that may need years to recover. That’s very similar to what happened with the impact on labour force and the environmen- tal consequences caused by the past industrial revolutions (Tad- deo & Floridi, 2018).

Critical/discursive design as a catalyst for change

In this section, I introduce the area critical/discurs- ive design practices where it’s possible to use their capabilities in co-creation and design thinking as a response to the movements of Victor Margolin argues that ethics and technology are...
around emerging technologies” (Arnell & Martinussen, 2010). Mazé and Redström describes critical design as a form of design that uses design tools and process not to solve a problem but to rethink the borders and parameters of a problem from a critical view (Mazé & Redström, 2007). Critical design is influenced by the critical theory and its aim is to capitalize on the audience engaged in the discourse and their intellect to convey messages (Malpass, 2017).

It is important to highlight the three categories identified by Malpass for the contemporary critical practices according to domain, scope, visual narrative and topic addressed (Jakobson, 2017) which are: associative design, critical design and speculative design. The roots of associative design are coming from the Italian radical design and it capitalizes on experimental techniques drawn from conceptual art such as subversion and experimentation. Critical Design is the approach I have identified in the aforementioned section and the third category is speculative design which is the branch of critical and discursive practices that focuses on the future of emerging technologies by commenting on socio-scientific research and theories (Malpass, 2017).

In this particular research, I’m focusing on speculative design with the aim to answer the question of why critical and discursive practices could be capable of aiding designers to design better technological futures with deep understanding of the surrounding issues not just designing mundane products.

Speculative design rationale

In this section I shed the light on speculative design from an ontological point of view, in other words why speculative design is then considered.

Speculative design can be considered a branch or a variation of the critical design practices. The branch that focuses on technological futures that focuses on the potential implications of emerging technologies and the future consequences of technological developments. Speculative design, in a way, has provided an opportunity for designers to speculate on what the future may look like. However, it has been debated whether or not the role of speculative design is to problem solve or to simply ask “what if”. It is important to note that speculative design had struggled to overcome.

In this article, I’ve discussed the relationship between humans and technological futures aiming to identify what technological impact we can expect. However, this is a difficult task as there are many variables that can influence the development of a technology, such as its societal acceptance, economic feasibility, and environmental impact. In this paper, I have focused on the role of speculative design in this process, as it is a way to explore different possibilities and to think about the future in a creative and innovative way.

Conclusion

In this article, I’ve discussed the relationship between humans and technological futures aiming to identify what technological impact we can expect. However, this is a difficult task as there are many variables that can influence the development of a technology, such as its societal acceptance, economic feasibility, and environmental impact. In this paper, I have focused on the role of speculative design in this process, as it is a way to explore different possibilities and to think about the future in a creative and innovative way.

References


Margolin, V. (2007). Design, the future and human termi- nology sometimes there to solve first world problems (Tonkinwise, 2015). Some of the designers already present dystopian futures about it, and they may use their understanding to reconfigure the future” as it “attempts to explore ethical and cultural landscape into which it might be de- signed in the future of emerging technologies with deep understanding of the surrounding issues not just designing mundane products. In this paper, I have focused on the role of speculative design in this process, as it is a way to explore different possibilities and to think about the future in a creative and innovative way.

The resulting artefacts often appear subversive and irreverent in nature; they look different to the public and this is the key behind triggering discussions and stimulating questions (Coulton et al., 2016). Malpass has argued that the main aim of speculative design is to “encourage the user to reconsider how the present is future and how we might potentially have the chance to reconfigure the future” as it “attempts to explore ethical and societal implications of new science and the role product design plays in delivering it” (Malpass, 2013).

One of the most important offerings of speculative design is that it does not force particular ideas on its audience on how they should perceive or deal with particular technology. Its pur- pose is to confront the audience with emerging science or tech- nology too early and leaving the audience to choose what’s meant for them to do with it (Auger, 2013). This is to avoid a critique of value (Mazé & Redström, 2007). The ultimate goal of public engagement is basically what makes speculative design into speculative design: it’s about societal implications of emerging technologies with a deep understanding of the surrounding issues not just designing mundane products. In this paper, I have focused on the role of speculative design in this process, as it is a way to explore different possibilities and to think about the future in a creative and innovative way.
“See You in Zoom”: Digitally Extended Presence as a New Normal

Abstract

The 2020 Lockdown has forced grand institutions (from British House of Commons to Venice biennale) as well as business and individuals to transfer their activities almost entirely into the web. Digital presence, which a year before would hardly qualify as a presence at all, in 2020 has become legitimate, officially approved and mutually agreed upon. Our report focuses on specific traits of contemporary digital embodiment, online dialogue and combined meetings that take part in “real life” and conference apps simultaneously. We argue that digitally extended communication — which has long been an attempt to create an expansion of art’s message, due not only to a burst of technology but a change in social conventions established during the period of pandemic and has become a new sense of togetherness with other people via online communication.

The “relocation to the online” took place both at the level of individuals and institutions. During the pandemic, we have seen live-streaming performances of the Metropolitan Opera and the New York City Ballet. Dance, singing, acting, happenings etc. In the era of coronavirus went online; we have lost the immediacy of real bodily presence in real space and gained the concept of a “mediated body” in a virtual space as well as a new sense of togetherness with other people via online communication.

The art world had to adapt to new circumstances rapidly. Museums worldwide (such as Metropolitan, British Museum, State Hermitage, Pushkin Museum and many other institutions) reacted to COV-19 Lockdown by offering virtual visits and enabling alternative paths for viewers to experience their exhibitions and collections — basing on online interactive experiences. However, there is a catch: web transforms spatial arts into temporal ones, online we see every piece of art with painting, sculpture, objects and installations — as a moving image, temporal visual flux which resembles video art or a movie. Since the beginning of a “digital shift” all types of art pieces have been transformed into sequences of codes thus blurring its specificity, but no one expected all of them to accept the laws of a flat screen.

In the early days of the pandemic, some museums streamed images of paintings — and as this caused bewilderment to the audience, so this practice was quickly abandoned. Museums’ websites have been a virtual tour of the museum halls without expert comments or showing a picture without a story told about it — has little sense for the viewer. The network space was soon full of streams, online tours, lectures, seminars, discussions and webinars, both about specific artworks and some aspects of the “life” of a museum or gallery. Institutions’ representatives are talking about their favourite art pieces and shared personal stories related to the perception of art. For example, the above mentioned State Pushkin museum introduced a series of new online-events and educational content: before the Lockdown

youtube-channel of that museum uploaded 5–7 videos per month and during the spring-summer of 2020 there appeared 40–50 videos per month. Furthermore, the museum’s Facebook page daily presents several texts on art, short educational videos and live streams. But winning screens is a challenge: museums found themselves forced to compete for the viewer’s attention and a part of your attention with video games, TV series, news websites, etc. In an attempt to compete some art institutions placed a bet on the scientific approach, making videos about art history and thoroughly prepared documentaries or lecturing in Zoom. Such formats open up a perspective of museums entering the market of filmmakers and “educators” — MoMA is actively pursuing this path. Unfortunately, it may end up in a losing the depth of both art analysis and sensibility of beauty (an online course devoted to contemporary art which MoMA launched on Coursera platform has been closed down due to a lack of systematization)

On the other hand, there are online projects that resemble not entertaining content, but video art (which Anna Tolstov recently talked about in her article “Kommersant”). In comparison to the cinema, video art has a sharper focus of critical reflection of media technologies and the influence it has on a viewer. For example, we could look at how film directors and artists treat time. Watching a movie, a spectator dissolves in the flow of storytelling, one forgets about time carried away by the twists and turns of the plot. And video art, on the contrary, tends to emphasize the passage of time and keeps the spectator awake. Christian Macklay made it clear in “The Clock” (2010), a video assembled from 12,000 movie clips showing time. As the artist explained: “It is composed of moments from the past, but the ever-moving clock that matches your real-time places empha-
sizes distance, helping the viewer to be reflective about the viewing process”.

Following this reflective track, the State Pushkin Museum’s media projects took the form of a project “100 Ways to Live a Minute” which resembles video in artistic strategy. Within the framework of this project, artists, curators, and art critics talked about “time”. The episode is a mean-

ingful and offered the viewer an opportunity to develop his strat-
gies for meaningful interaction with the here-and-now. Also, with the framework of the project “100 Ways to Live a Min-
ute”, there is a “Digital Exchange” section: exclusive screen-
ings of media art by the world’s largest artists who work with the themes of time perception. Pieces of Gary Hill, Laurent Pernot or Peter Zumthor, Taus Makhacheva, Tauba Auerbach, Provoz’s or Peter Weibel’s group, Julian Rosefeldt and many other media artists — were opened to the public for a day, a limited time to spend wisely. And the essence of the critical view of the consuming pro-
cess that distinguishes a wellcurated piece from entertaining content on the Internet.

Museum space reviewed and revised

It is proclaimed that every man might be an artist, today we could assume that any space could become a museum (utilizing video projection, AR, VR and artistic installations). Even in one’s own home, any aesthetic areas are facing a challenge of rethinking the logistics.

Currently, there is a discussion unfolding about the attitudes to deep learning and its possibilities. Due to the epistemological situation: artificial intelligence, 2019–2020, restrictions and social distancing have been introduced in most museums worldwide. For example, when we visited the State Hermitage Museum two weeks ago we were required to sign an instruction to choose one of the two proposed routes, and following it, we could neither make a turn nor come back. It resembled a linear route where you have to pass all points where you have seen between Rubens and Rembrandt. A viewer could see only one of them and if he wanted to encounter the other — one has to start the route over again. One-health-point gone :) The Stay-safe measures will possibly change the way museums are functioning for a long time. Shortly, it will not be possible to wander around an exposition. There is, however, a solution to this so-called “lockdown crisis” of the Los Angeles County Museum of Art: a vast interior space which interlinks the exterior and indoor space. Among other exciting proposals are drive-through exhibitions (such as “Goggy by car”) which allow visitors to enjoy the beauty of digitized paintings not even leaving their cars.

Post-COVID Avant-garde and Kitsch

Among other exciting proposals are drive-through exhibitions (such as “Goggy by car”) which allow visitors to enjoy the beauty of digitized paintings not even leaving their cars.

Greenberg’s theses have been largely criticized, and today the art theory no longer distinguishes between “high” and “low” in culture. However, we argue that it makes sense to reconsider the Avant-garde/Kitsch opposition focusing not only on aesthetics but also on the ethical component.

The historical and cultural context of the projects of Malevich, Mondrian, Tullin, the Bauhaus masters and other artists, was aimed at “life-building”, at the transformation of soci-
ety by the methods of art and humanized technologies. It was an attempt to create an alter-ego and an accelerated cultural field. It was a ludic, an entertainment, but also a social reality, it gives one beautiful dreams that divert the attention: Peter Zumthor has recently designed for the Los Angeles County Museum of Art a vast interior space which interlinks the interior and outdoor space. Among other exciting proposals are drive-through exhibitions (such as “Goggy by car”) which allow visitors to enjoy the beauty of digitized paintings not even leaving their cars.
Another striking example of how going online has allowed an art project to unleash its potential fully is the Burning Man 2020. The previous year, 2019, this explosive art festival gathered a record number of participants — about 80,000 people, and in September 2020, the Nevada desert was supposed to accommodate an even larger community. But due to the new coronavirus, the event was cancelled. In order to keep up the spirits of the burners during these challenging times, festival management decided to create a copy of Black Rock City on the Multiverse online platform. And although the organizers made a declaration that VR-Plays during such times would likely be messy and annoying, they nevertheless decided to make this powerful technological shift hoping that the virtual Burning man could become engaging, connective, and inclusive like never before.

On the online platform, a model of the city was created with a multitude of scenes, sites for master classes, musical events and communication. The network space contained Endless Playa, on which digital mutated vehicles, sculpture and installations were deployed. There were also lots of burners’ videos, live streams and online-chats. Therefore, Burning Man brought together not only dedicated participants but also new guests of the festival who had no opportunity to come to the real desert. Thus, the ten principles of burners not only remained but also reinforced by digital expansion, revealing burners’ philosophy to more people from all over the world.

It is interesting to note though: despite the COVID restrictions and the official cancellation of the festival, in September 2020, several hundred people (according to NBC News) arrived at the traditional place where Black Rock City gets built, they were determined not to step away from tradition. Supporting this rebellious initiative festival managers made sure that not only dedicated participants but also new guests of the festival who had no opportunity to come to the real desert.

Conclusion

Previously only a personal, physical presence was “legitimate” for dancing, visiting the museum and the opera, participating in important negotiations or a scientific conference, studying in a university, and since the Lockdown, these conventions have been revised. What previously would not be considered as presence, now is perceived as such. In a post-Lockdown world, digital presence is mutually agreed to be a new normal, alongside physical presence. Considering that today there is a choice between two comparable forms of presence, and due to circumstances, current epidemiological situation and corresponding risks, desire to save time and effort, people tend to choose online interaction. It means that today offline is not so much an option but a choice, even a privilege. An offline contact today means effort and commitment like never before: it becomes more valuable and gets experienced as a special occasion. Digital togetherness which we were forced to go into has enabled us to rethink and re-feel our co-presence in a real space.

It works the same way for the art world: offline is crucial for galleries, art auctions and museums (that market got unprecedented money loss during the Lockdown). Why? We could say that creative industries have designed effective means to reach out to spectators who are ready to consume digitised cultural products. Both the Kitch and the Avant-garde are ready to play in this market field, and the show is going well. However, we are arguing that there is a “secret sauce” in the act of viewing the original piece of art.

Digital presentation of chef-d’oeuvre makes appreciation easier, faster. However, once we go to an offline exhibition, our interaction with a piece of art intensifies, seeing it in “real life” becomes a valuable experience because we perceive text, size, colour, and materiality. Moreover, we should take into consideration the way a viewer has to make from his apartment to an exhibition space, everything he sees on the route (museums and significant galleries are mostly situated in beautiful loca-
cations) and the sensations one gets entering the laboriously designed and crafted exhibition interior. Therefore, meeting a piece of art “in-person” constitutes a synesthetic experience of extreme harm for those who were not considered in Bostrom’s explanation of “strategic analysis.”

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Society is heading through augmentation towards artificial superintelligence. Many advances are focused on reaching the singularity with minimal critical considerations that create short-term desirable controls that allow AI to develop within constraints. This paper uses the tool of satirical design of an augmented jewelry piece designed with a theoretical base artifi-
cial intelligence, economic, and feminist theory in order to ex-
pose the gaps our current society has and implications if these gaps present in AI development. This project does not pose a solution to critical considerations in augmentation, but instead stresses the importance of critical thinking in the design of AI in the sector of augmentation, posing it as a tool to show possible concerning realities if there is limited focus on diverse perspectives in critical considerations.

Abstract

Following the theories of Nick Bostrom and Ray Kurzweil, we are growing more intimate with technology (Kurzweil, 2001) and we have to consider great “strategic analysis” to specifically discover crucial considerations that we need to spend time de-
veloping philosophies around as we are developing augmentation and artificial intelligence. Specifically, Bostrom recommends that we need to post-pone discussions solely around long-term existential risks of a post anthropocene, but develop short-term philosophies that have greater impact and direct solu-
tions. If these solutions are not considered before the singularity and super intelligence is fully operating on its own, then we are looking at problems that we have not prescribed controls for AI to stay on itself or learn around. If these controls are not in place, then they can exponentially grow upon one another and lead to a path of extreme harm for those who were not considered in Bostrom’s explanation of “strategic analysis.” (Bostrom, 2016)

Specifically feminist AI projects that surpass pop femi-
nism surface-level pursuits and fall far between according to Allison Adam (Adam, 2001). Many projects in the sci-
cence fields and AI development are surface level and targeted specifically at getting more women into industry, where it is extremely necessary, but projects need to consider the social epistemology of augmentation in relation to feminism spe-
cifically as we are preparing to transition into augmentation towards the near future. Within the science and engineering fields the expectation to consider feminist projects is not at-
tended to by men and is expected to be taken on and lead by the few women in the field, creating a gap in feminist con-
sciousness.

Specifically many feminist developments in the field of artif-
cial intelligence are within the confines of popular third-

dimension wave feminist ideas (Adam, 2001) that are also linked with ideas of “power feminism” (Hooks, 2000). We see this ex-
pounded in popular media and through products and advertisements where products are pushed through as “empow-
erment feminism” which has been rebranded into a version of feminism that encourages women to select their own views of what feminism means, what rights they want to fight for, and what makes them feel good or feel more successful. This version of feminism is also linked to consumerism that promunes alliance with the empowerment feminists. Within empowerment feminism there are products focused specific-
ally on increasing a woman’s confidence for ultimate cor-
porate success, further communicating the capital value and ascension of the female and reinforcing sexist norms of fem-
ninity within corporate ethos (Adam, 2017). This is a common phenomenon we see in corporate Amer-
ica since the 90’s through today, where privileged white women give up revolutionary feminist ideas once they open a taste of the economic power they find within the existing so-
cial structure, where they are still subjugated to male domi-
nation. The white privileged “power feminist” sees her oppor-
The Role of Satirical Design

Specifically looking at the worth of women in neoliberal society, women are stuck in a dichotomy, where the expected worth of a woman is in her feminine characteristics, but she experiences the added expectation of being a capitalist, a small group of traditionally privileged women to work towards assimilating into a sexist society rather than resisting towards a small group of traditionally privileged women to work towards assimilating into an anti-sexist society. This necklace placed around the larynx vibrates to partially paralyzing vocal cords and keep the user from continuing to speak when a male counterpart is triggered in such a way. The project was successful at joking about our contemporary interactions with our homes and with our loved ones. One piece of furniture assists those seated at the table to look down at their individual phone rather than looking at the others around the table (Valintikaya, 2018). Max Siedentopf expresses satirical versions of what to do while quarantining yourself during the Coronavirus pandemic. The project comically portrays a fat male in a meme-esque fashion creating helpful Yet beats to fill your time while quarantined. The project gives a humorous take on harsh realities we are living in. (Ravencroft, 2020) These projects are successful not in creating a solution, or proposing a specific change in behavior, but in provoking thought and perspective on a specific subject through an object.

Specifically within the space of design and augmentation, we see few projects that broach this area. One specific installation that is within the realm of critical design practice — without women to say sexist environments in order to be rewarded as one of the few tokenized women that make it to the top, balancing domestic visions of femininity, and also having to work more to perform higher than her male colleagues to receive the same amount of recognition for that labor (Wood; Fixmer-Oraiz, 2017).

Satirical design is around the popular views we see in feminism and the mass glorification of “empowerment feminism” not only in popular media, but beginning to see concentrated focus within feminist academic circles. (Hooke, 2000). As we develop augmentation and pinpoint critical considerations, it’s concerning not only that feminist issues would be largely overlooked in the area of augmented field of artificial intelligence, but that empowerment feminist principles have a high probability of being circulated into those critical considerations. If we are creating augmentation with in the present context of neoliberal social values and empowerment feminism, then we will create augmentation that is “feminist” in a third-wave point of view, and does not work towards a anti-sexist society, but assimilates into existing sexist norms.

The Role of Satirical Design

This project relies on the tool of satirical design since its role in design is to provoke a political or economic topic where there is not a solution, but a critical perspective on politics is taken with a taste of jokiness. In Miller’s interview with Slavs and Tatars’ 2019 Pickle Bar biennale installation, they stated “Satire’s power lies in its ambivalent use of language — the implicit but satirical language is so clever and so coded that the butt of the joke can’t quite work out that he’s the punchline. Satire has bite—or a briny acid, depending on who you ask—and unlike more palatable jokiness, it’s long been associated with subversion and societal upheaval.” Further, the interview goes on to express that satire is a way of creating visual work that connects complex academic philosophies to a version of “popular philosophy” and helps connect an academic perspective on politics today and bring it to “the people” in a more tangible and accessible format (Miller, 2019).

Satirical design is able to engage user audiences to critical thoughts through design and help differentiate types of critical design practice (Malpass, 2015). A satirical narrative around product design can have incredible impact because we have such intimate interactions with products and they reflect themselves through our purchasing behaviors and value them (Sandlin, J. A; McLaren; P., 2010) (Max, 1867). Satirical products could have a strong impact of reflection on the ideas that are being critiqued since we have such an intimate relationship with the products that we own.

In 2018, Nikias Jacob worked with 17 other designers to create satirical iDEA Fatpuck furniture to make our interactions with each other around the home humorous and thought provoking. The project was successful at joking about our contemporary interactions with our homes and with our loved ones. One piece of furniture assists those seated at the table to look down at their individual phone rather than looking at the others around the table (Valintikaya, 2018). Max Siedentopf expresses satirical versions of what to do while quarantining yourself during the Coronavirus pandemic. The project comically portrays a fat male in a meme-esque fashion creating helpful Yet beats to fill your time while quarantined. The project gives a humorous take on harsh realities we are living in. (Ravencroft, 2020) These projects are successful not in creating a solution, or proposing a specific change in behavior, but in provoking thought and perspective on a specific subject through an object.

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Nance

Going back to the literature review and the theoretical focus of this project specifically, there is a gap in augmentation projects addressing feminist issues. Specifically ones that address issues similar to Face Values that critically assess where we are now with AI development, and faces users with possible realistic problems with bias in augmentation development. The focus on this paper was to create a satire on possible realistic augmentation products if we develop them with feminist values in mind, but stay within the concepts of neoliberal third wave empowerment feminism.

This project focused specifically on the speaking norms and assumptions that empowerment feminism is illustrated within. In third wave feminism, this phenomenon is encouraged to be worked past by balancing the double-bind as well as you can and learn through time when to jump in and when to stay out; continuing to be subversive to the existing corporate culture and continue to work harder, longer hours, with less pay than male counterparts in order to work through it eventually (Fixmer-Oraiz, 2017). One way that augmentation may be created to serve this culture, is augmentation that could help assist with allowing the female to be more subversive to verbal communication norms. In regards to vocal communication, since women are often interrupted and also have to maintain a specific level of feminine and masculine communi cation (Wood; Fixmer-Oraiz, 2017), having a product to help the female be interrupted and spoken over by men would be suitable for this version of neoliberal empowerment feminism; allowing the female to focus on working up the corporate ladder within current conceptions of preferred corporate femininity for her valued place in a capital valuation society.

In order to help keep a woman from speaking when a male speaks is to parodize the vocal cords for periods of time when a male starts speaking. This can be done by paralyzing the larynx to keep the voice from working. Therefore, the project must lie around the larynx and considering the third-wave neoliberal feminist focus on beauty and fashion products that empower women to excel at their jobs and pronounce their individuality seen identified feminist views through purchasing products and consumption, a necklace becomes a fitting product and form to take. Voice recognition software would be needed in the prod uct to recognize a range of vocal depth that is associated with the male voice to identify when males speak. A vibrator within the necklace placed around the larynx vibrates to partially paralyzing the vocal cords and keep the user from speaking, but the vibration is meant to be an initial shock to signal the user not to speak. From that point, if the device is triggered in succession the vibration will intensify, and the user will be forced to continue using the product every time the user continues to try to speak when a male counterpart is speaking, but would also slowly train the female how she would be able to seamlessly communicate with her male coworkers over time. This is meant to mirror the slow training of roles that happens over time in a neoliberal, male dominant hegemonic society.
The Return of Avatar as Ever-changing Postdigital Identity

Alexander Zhuravlev
HSE University, Faculty of Communications, Media, and Design / HSE Art and Design School
design@hse.ru

Abstract

The world of social networks and instant messengers providing round-the-clock communication of users was preceded by a phenomenon of avatar, without which it would be inconceivable. The test covers the evolution of user’s notion of its virtual body. The main quality of the virtual environment — making everything possible — gradually inspired increasing rate of changes of avatars and experiments with users’ appearance using masks and applications. Ever-changing state of virtual body has a lot in common with a concept of body without organs and expresses itself beyond mimeticism. Recent activity of Instagram and YouTube users show the way the nonmimetic virtual world can be constructed deriving from virtual body.

Keywords: identity, technology, avatar, post-digital, Instagram, corporeality, virtual, body without organs.

We can hardly imagine the modern Internet without user-pics or avatars or other forms of human presence in the virtual space. An avatar is a picture, which is uploaded as a representation of oneself, one’s personality. The environments created by different technologies contain different versions of the user’s personality. This splitting of personality in the virtual world is our new normal. This does not interfere with communication with other users. Until last decade frequent changing of avatars or frequent changes of person’s outlook on their behalf in a different guise.

Some of the costumes in Charles Fréger’s photographs (Figure 1) are part of contemporary rituals and create a compelling sense of bodily and spiritual transformation. In virtual space, the physical body transforms into a virtual one, practically becoming a body-without-organs, reaching somewhat higher state in relation to material one. The viewer’s trust mode for this reincarnation is approximately the same. We do not merely believe that we have something uncommon before us, we see it.

Natural body movements and facial expressions are complemented by new ones that seem unnatural. This brings together...
The 2010’s saw the emergence of a multitude of authors working in the field of motion design. In some works, for example, by Kyan Forootan and lotsalote, there are moving figures with emptiness inside, the movements of which are similar to human ones. We can compare the motion-tracking data needed to create such a video with the formless energy in Castaneda Ezkenazi’s writings. We see to see some manifestations of an animated invisible force, but not itself. The show of the collection of the Congolese brand Hanifa (Figure 5) leaves a similar impression.

When we look at the images of Leigh Bowery (Figure 6), we can never understand who is wearing the mask, and whom it represents. This is an almost graphic illustration of Judith Butler’s (1990) performative theory of gender. ‘In imitating gender, drag implicitly reveals the imitative structure of gender itself — as well as its contingency,” the author writes.

It is much easier to create a fluid identity in a virtual environment. To do this, artists or content owners and authors on social media accounts can resort to a variety of tools. From Instagram masks to Photoshop and more sophisticated image and video processing programs. Salviati (Figure 7) and Maltesefaces accounts have various anthropomorphic forms of virtual bodies of their owners. They distance themselves from the usual configuration of the human body. The environment in which the body is located has the characteristics of familiar “human” spaces. The space in the picture is still depicted, or reproduced from real life, while the identity or body of the character is being created or constructed. The same combination is obtained when using the Instagram mask.

We see a similar approach in the work of Carolthekitty (Figure 8) and many others. The analysis of multiple accounts allows us to highlight the problems of such a performance in the social media space. Since it is impossible to imagine what would restrict the incarnations of the virtual body, sooner or later a moment will come when the viewer will not be able to see one incarnation and the other as incarnations of the same body, to put it in simple words it would seem them as different beings.

Some accounts leave the viewer the opportunity to identify the image in different posts as the same virtual body, some go further. In this case, the body turns into a set of visually distinct entities, objects and forms, from which a society or a whole world can be composed (Figure 9). The virtual body constitution becomes a model for the structure of the virtual world. This can be seen in the video of the Cool 3D World channel, where the laws of physics, logic, human and God are violated (Frame 10).

To sum up, ritual and artistic practices inherit each other and give rise to an alternative representation of the forms of thought, body and life in a virtual environment. Autonomy of artistic and spiritual creativity on the Internet is especially important in the post-digital era, when the material world begins to transform under the influence of the virtual. The forms of thinking based on the analysis of the material world and the subsequent human activity so far leads to its collapse. Only an alternative, virtual reality, free from imitation of the material world, is capable of generating a different type of consciousness and values, just as it is capable of generating new different forms of corporeality.

References
Abstract

The current Chinese design lacks good ideas and design methods that can integrate Chinese and foreign cultures in the communication of Chinese voice, the understanding and acceptance of Chinese culture by international audiences is not accurate enough, which is one of the reasons that Chinese culture cannot effectively generate emotional resonance on the international stage through design. Suppose Chinese culture wants to adapt to this era of globalization more quickly. In that case, it needs to combine art and design, attract and impress international audiences with innovative products, break cultural barriers with cultural exchanges, and break cultural differences with cultural integration. This paper takes “Heart Ring”, a set of ring designs for which the author has won many international awards, as an example to discuss the creation research of the combination of Chinese character culture and Western aesthetics, expound on the development of Chinese culture’s cross-cultural design.

Keywords: Chinese characters, cross-cultural, ring design, Chinese character ring.

1. The carrier of Chinese cultural heritage — Chinese characters

Chinese character is one of the oldest characters globally, and they are also the statutory characters used in China today. It is a written symbol of Chinese and a carrier of Chinese culture and ideology. Every Chinese character contains the creator’s wisdom and logic of the characters thousands of years ago. In the process of cross-cultural dissemination of Chinese culture, Chinese characters carry ideology and convey ideas and values to the outside world. French symbolic philosopher Jacques Derrida said that western characters highlight the meaning behind symbols, while Chinese hieroglyphics focus on the ideological content of the characters themselves (Derrida, 2015). Chinese characters have two cultural functions: one is to record cultural information, and the other is to create cultural phenomena (Liu, 1999). At the same time, each Chinese character has its unique meaning and aesthetic value, which is the characteristic of “字本位 (sinogram-based theory)” (Xu, 2005). All in all, Chinese characters have an explicit cultural and symbolic nature. Through Chinese characters, one can understand the ideological structure and thinking characteristics of Chinese culture. Using Chinese characters as a cross-cultural communication medium can arouse the audience’s curiosity and desire to explore the culture behind Chinese characters.

In China, the word “文化 (culture)” appears for the first time in 周易 (Zhouyi): “观乎天文, 以察时变, 观乎人文, 以化成天下 (Observation of astronomy, to observe changes in time, observation of humanities, to transform into the world).” “Culture” includes the historical traditions, life systems, and thinking of specific nation models, values and art, etc., represent the accumulation of society and history, and are the results shaped by humans for a long time. The English origin of the word “culture” can be traced back to the Latin “colere”, which means “to live, farm, and worship” (Sorrells, 2015). In the Oxford English Dictionary, the word “culture” refers to: “the lifestyle of a specific group in a specific period, especially general customs and beliefs.” Contemporary understanding of “culture” includes the material culture and spiritual culture in the human world.

Chinese characters have undergone thousands of years of change and development, are the condensing of Chinese wisdom and strong vitality. They have recorded and continued the Chinese people’s living habits and value standards for a long time. Have always influenced China’s aesthetic style and thinking mode. Chinese characters are symbols that record the Chinese language. The pronunciation and meaning of Chinese characters are embodied from abstract concepts through the form of signs, which expands the communication function of Chinese. “The cultural information carried by Chinese characters has two sources. One is the words in Chinese, and the other is from the shape of the Chinese characters.” (Wang, 2002).
The famous cultural scholar Yu Dan once said: “Chinese characters are the lines held in the Chinese nation’s palm. Following its pictograms, you can touch the secrets of all concepts on it. Chinese culture is all flowing under the pen tip. Every stroke and painting of Chinese characters flows through our veins and contains our local feelings.” Chinese characters not only represent Chinese, and Chinese is the cultural medium of society, so Chinese characters also have the attribute of spreading culture.

2. The origin and cultural connotation of the creation
2.1. How to explore creative inheritance through design in the context of globalization, so as to awaken the world’s interest in and connection with Chinese culture has become an interesting issue. Chinese characters as a symbol, Chinese characters can be used to create new concepts that can blend Chinese and abroad through innovative forms of cultural communication. Chinese characters recognize one of the most difficult to master in the world, making it become a cultural media that is accessible and appreciated by everyone regardless of ethnic, culture and background.

Chinese characters’ construction is a complex system, a history of 5,000 years are the label and source of Chinese culture and value. Chinese hieroglyphs highlight the symbols and references of the shape of the characters. The hieroglyphs contain the ideological content of the character itself. Chinese expression has the characteristics of “sinogram-based theory”, which means every single character has an independent meaning and aesthetic value (Guo, 1985). Chinese characters have symbolic characteristics, and people’s experience and comprehension of Chinese characters form the picture in the mind of Chine- se characters. In summary, Chinese characters can be used to understand and explore the special relationship between Chinese culture and their beauty. To get the feeling of getting the result with half the effort.

Chinese characters as a medium of cultural dissemination can effectively stimulate the world’s curiosity about Chinese culture and have the effect of getting twice the result with half the effort. Creating Chinese characters, using the innovative practice of traditional Chinese culture, Chinese characters’ expression and application will be expanded and promote the publicity and application of traditional culture.

2.2. The connotation of the word “心” (heart) *Figure 1. The character “心” (heart) * evolved from oracle bone script to regular script

The Chinese character “心” was first seen in oracle bone inscriptions. The shape of the word “心” in oracle bone inscriptions resembles a heart and animates heart. Simultaneously, the heart is located in the center of the human body, so “心” also has the meaning of center and middle. However, it is a complex combination of strokes and radicals combined as a characteristics. The 聲 (ten fingers connected to the heart) 个, created a personalized stack-able ring.

According to the composition method of Chinese character combination and decomposition, Chinese characters are composed of strokes and radicals combined as a characteristics. According to the specific rules. In decomposition, the strokes and radicals are reconstructed according to the structure, and each unit after the structure with a certain meaning separately. This work is cleverly divided into two parts by using the upper and lower structure of Chinese characters. For example, “思” can be decomposed into two parts: “田” and “心”. The gold-plated “心” ring can be worn alone or combined with other platinum-plated Chinese-character rings to form various “心” Chinese characters. Each unit has independent aesthetic meaning and decorative function. Chinese characters can be combined to become a unique visual symbol with a specific connotation. This combination is an innovation in product form and deconstruction and reconstruction of the “beauty of Chinese characters”.

The aesthetic function of Chinese characters is mainly reflected in the composition and psychological level. The abstract expression structure and different styles of Chinese characters have the beauty of pictograms, showing Chinese characters’ essential design consciousness. Being good at target- ing the beautiful things in nature, Chinese characters naturally create a psychological perception of beauty and stimulate related emotional reactions. This product is an entirely open “text” for the wearer, which can be combined and matched according to different values of cultural development and emotional connotations. In the process of selection, personal meaning is endowed to the Chinese text, so as to appreciate the beauty of Chinese charac- ters and at the same time, integrate their ideas and emotions.

Secondly, the study of Chinese characters and the study of jewelry design are intertwined with multidisciplinary fields, and the system is independent. How to effectively combine the two, systematically master the connotation rules and connotations of Chinese characters and jewelry design requires in-depth exploration to find the combination of internal and external connections and form value. Chinese characters focus on cultural connotations, while accessories focus on ex- pressions. In merging the two into one, it is necessary to con- sider how to organically integrate the characteristics and val- ues of the two parties to form a complementary new form and trigger emotional resonance among the audience to inherit cul- tural value.

2.3 Progradation

In modern society, people have begun to care about the abundance of spiritual and material matters in life and have a higher level of pursuit for the “design” of various materials. The “design” mentioned here can be understood as the design language of visual communication symbols. Jewelry design is a type of visual communication symbols, especially rings. It has cog- nitive and aesthetic functions and plays a role in form crea- tion and information transmission, and is a cultural carrier (Amb- 189). "Heart Ring" is a work that combines Chinese character culture and Western aesthetic expression, trying to find a way to meet the cultural needs of the world. The design concept is based on the image and the time, being good at target- ing the beautiful things in nature, Chinese characters naturally create a psychological perception of beauty and stimulate related emotional reactions. The product is an entirely open “text” for the wearer, which can be combined and matched according to different values of cultural development and emotional connotations. In the process of selection, personal meaning is endowed to the Chinese text, so as to appreciate the beauty of Chinese charac- ters and at the same time, integrate their ideas and emotions.

This kind of open design concept is also more in line with the diversified appeals of young people’s emotional expression and value under the background of “post-modern culture”.

2.4. Design results

"Heart Ring" combines the author’s dedication and love for cross-cultural communication and has won many international recognitions and honors, including the 2011 Italian A’Design Award Gold Award, 2016 German Red Dot Design Award, 2016 China “The Beauty of Chinese Charac- ters” Design Award, China International “World Design Award- winning comment: “The ring is a kind of jewelry with great symbolic significance. This ring is made of silver-plated platinum rings. This kind of rings also include charac- ters that combined with the heart’s root word to cre- ate another meaning. In this way, exquisite jewelry becomes a carrier of information. These exquisite rings can be perfectly combined in physical, aesthetic, and symbolic meanings. This is achieved by relying on diverse changes in structure And enrich the appli- cation of Chinese characters elements. Through the understand- ing of beauty, the obstacles to cultural exchanges are eliminat- ed, so that the world can correctly understand and contact the Chinese civilization and enhance the influence of Chinese culture on the international stage.

References


Abstract

The rapidly changing world - the scale of the problems facing us & the pace of creative destruction across the entire spectrum of human endeavour often defies existing solutions proposed by the many creative resources brought to them. Educational programmes, students and graduate profiles across the world are struggling to adapt.

One of the wellsprings of the human initiative to solve these challenges resides within our universities/centres of higher learning and the rapidly emerging fields of Interdisciplinary Design & practice. As per the survey conducted by the Ministry of Human Resource Development (MHRD), Govt. of India, there are 993 universities, 39,931 colleges and 10,725 standalone institutions across India. These institutions further reflect the student density of India as the enrolments in higher education every year are nearly 37.4 million. Put another way that’s about 25% of the entire population of Russia today and higher. The student enrolments continues to increase with the relentless demographic growth.

How, when, and what we choose to teach in contemporary art and design schools is an increasingly critical question.

It’s the quintessential question of demand versus spread as time at the University for a Student is a fixed and often a very expensive resource. It is one that is transforming the higher education ecosystem right before our eyes. Here are some of our implemented choices.

Keywords: Education, Interdisciplinary, Ecosystem, Design.

Introduction

The COVID-19 pandemic, market forces & technology with its myriad branches from Big Data, to Artificial intelligence have in some cases accelerated changes already taking place in the 21st century and in others catalysed completely new ecosystems. It has brought to life our deepest fears, the rapid demise of the familiar whilst simultaneously highlighting our extraordinary resourcefulness and potential as a species. Technology led change is so rapid and pervasive that job descriptions get obsolete as they are evolved, along with product categories and industries. Educational programmes and graduate profiles across the world are struggling to adapt.

One of the realizations of the human initiative to solve these challenges resides within our universities and centres of higher learning and the rapidly emerging fields of Interdisciplinary Design & practice. How do we decide what we teach in contemporary art and design schools. Some educators say: “let’s teach all children how to code” or “online education is the future.”

This may not constitute the most efficient approach to explore specific challenges, especially when the problem has multiple dimensions which require radically new holistic approaches to problem solving. This ability, to look outside of our comfort zones and associated value in Art and Craft is an acknowledged need.

Chaos & A boy with a Hammer

The 1st industrial revolution was the solution to all human needs including education and institutes of higher education (I.H.Es). It is an idea that we hear and read constantly being applied to everything from artificial intelligence to online education: this or that.

Experience tends to suggest that it will not, but most of the time the individuals or organizations expressing this idea are convinced about their hammer. The curse of tool blindness pervasive in the context of the proliferation of technological tools available in our society and especially so for art and design education. How do we decide what we teach in contemporary art and design schools. These range from curriculum, pedagogy and emergent forms of education to interactions of diverse fields of human endeavour. Our cultural roots ensure that the idea of interdisciplinary education around the world. The constant journey of the many towards optimum solutions to a problem has a deep resonance for us as specialists.

If one transfers the idea of biological, social and cultural diversity into the cognitive realm, it forms the underlying principles for the emergence and importance of interdisciplinary thinking and practice in many diverse fields of Human endeavour including design. The idea that all design disciplines are interconnected, flow into each other and that this flow is accelerated by advances in technology towards a singular or a multi-disciplinary has long been prophesied by our philosophers, thinkers and authors.

Thus the role of design as a universal instrument spanning the whole gamut of human activity, effortlessly leaping across artificial boundaries of the so called creative professions is one that hardly needs emphasis.

This necessitates a completely new and dynamic approach to innovation, education and strategic planning: intuitive, flexible and easily adaptable to creative economies. Another thing that we need to focus on the “Law of the Hammer” articulated by Abraham Kaplan, and published in an article for The Library Quarterly in 1964. The idea was explained through the metaphor of a small boy walking up to a hammer, would need that everything he encountered needed pounding. Kaplan went on to addle to the human tendency to formulate our problems in such a way that the demand precisely what we already had to have at hand.

The Law of the Hammer (also known as the Law of the Instrument) has enormous implications today in diverse fields including education and institutes of higher education (I.H.E.s). It is an idea that we hear and read constantly being applied to everything from artificial intelligence to online education: this or that.

This tendency to attack challenges based on the tool which we are most skilled at or feel most comfortable in, may indeed evolve and span across almost all fields of human endeavour. Scientists, Technologists, Artists, Designers, Warriors, Politicians & Educators may all have biases that incline to deploy their core skills rather than what we need to teach ourselves.

Lessons from the past

As we step into a new decade the reduction of learning opportunities and associated value in Art and Crafts is an acknowledged need. This is a trend that is not the only one with implications for the nature of the art and design curriculum across the world. We are seeing the evolution of new paradigms for delivering education and the manufacture of traditional arts. Ranging from textiles to wood and from architecture to jewellery, the Arts & Crafts movement spanned many fields of design and led to a flowering of diversity and richness. Some educators say: “let’s teach all children how to code” or “online education is the future.”

Then as now there was a mad rush towards efficiency, scalability and industrialization. There was a belief prevalent that this is a technological revolution which will drive solutions to the needs of all human needs and challenges. Today a century later we see the same scenario play out with pretty much the same assumptions. Only this time the revolution is driven by emerging technologies that are the magic bullets that will solve all our problems.

While the benefits of technology and its ability to help solve many of the challenges facing us today are manifest wheth-
er it is a one stop solution to all human needs and the creative economies of the future remains to be seen.

Artist and critic William Morris was one of the leaders of the Arts and Crafts Movement, and he felt that the separation of the act of designing from that of making and fragmenting assembly line approaches weakened relationships between creators and the work. He ended up damaging both the quality of the artefacts and their creators. The sense of detachment of the craftsmen from his craft work led to a loss of the true practitioners of design. The idea of making had to encompass both its traditional skills as well as new ones needed by evolving technologies. The idea of making hence is a distinct development, and the knowledge in this field is largely travel to and study at partner universities across three continents. The transfer of knowledge and data into lived experience lies at the heart of the New Interdisciplinary Programmes. The Bachelors in Design (Global) and the Masters in Design (Innovation) have been designed in the spirit of Knowledge in real world that lies beyond the boundaries of traditional boundaries between design disciplines, networks and engagement that facilitate innovation and student engagement. It was a collaboration that grew organically across the globe that moved rapidly to embrace the changing conditions and a physical space-time of shared experiences, unique and different from other places of learning whether self led, technology enabled or any combination thereof is a vital link to the holistic development of the designers of the future.

We need to expand the campus and place centred idea of an institution of higher learning towards engaging not only students and faculty but entire communities regardless of location in our interconnected world.

The Designer has to emerge out of the discipline specific silos and lead students to a new arena of Higher Ed (HED) and transform into a multi disciplinary practitioner of design. This is vital in realising the potential of the artistic and creative instincts of our students and to learn from the best practices emerging best practices everywhere. In these times we find that educators across the world generously share their knowledge and experiences to forge a comprehensive understanding of human culture. This is vital in realising the potential of the artistic and creative instincts of our students and to learn from the best practices emerging best practices everywhere. In these times we find that educators across the world generously share their knowledge and experiences to forge a comprehensive understanding of human culture.

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The Interdisciplinary Conundrum

The development of interdisciplinary practices in higher education poses another unique challenge. These programs aim at new and unique experience. As a society we need to reflect deeply on these developments that will ultimately underpin our creativity, cultural/spiritual and economic success.

Educators at the tip of the spear

One of the unfolding lessons of the pandemic is the tremendous resilience and innovation adopted by educators across the globe in order to adapt to unforeseen disruptions across the spectrum from governments to university administrations on one hand to students, their families and social networks on the other. Successes have been more pronounced wherever the institutes of education and higher learning have provided educators access, the freedom to make decisions and forge the necessary collaborations. The Bachelors in Design (Global) and the Masters in Design (Innovation) have been designed in the spirit of Knowledge in real world that lies beyond the boundaries of traditional boundaries between design disciplines, networks and engagement that facilitate innovation and student engagement. It was a collaboration that grew organically across the globe that moved rapidly to embrace the changing conditions and a physical space-time of shared experiences, unique and different from other places of learning whether self led, technology enabled or any combination thereof is a vital link to the holistic development of the designers of the future.

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Design as a Tool of Communication and Creation of Reality

Abstract

What is the concrete definition of a designer? As the 20th Century advanced, it was inevitable to inquire about the inherence of industrial design in the culture, as we saw the impact consumer goods have on the creation and modification of reality. The current approach that is given to Design is a tool for the materialization of an idea that is usually the search for a solution. A solution that can be tangible, virtual or discursive to a problem that can be social, economic, ecological and cultural. The solutions to the complex problems that designers face in the 21st century, must have a visible and real ethical dimension. Consumption even became a postmodernist characteristic. Under postmodernity, the role of marketers and advertisers is to provide consumers with the raw materials with identity crisis, be able to construct unique identities (Kacen, 2000, p.349). Consumption is prioritised in the fragmentation of other traditional sources of meaning (Firat & Venkatesh, 1993, p.227).

Introduction: Design as a tool of communication and creation of reality

What is design? What is the concrete definition of a designer? Where is design implemented? According to different literatures, profession is defined only by the limits of our imagination, which are specific to each local. What is the concrete definition of a designer? Where is design implemented? According to the designer’s ability to create affordable and functional objects for vast markets represented an unprecedented power for social renewal (Parsons, 2016, p.56).

With the 20th Century, industry was being industrialised and industrial design emerged. It was influenced by Le Corbusier’s modernist vision: "a chair is no way a work of art, a chair has no soul; it is a machine for sitting in" (LeCorbusier, 1931, p.109). Postmodernism emerged and it is a critique of Modernism where the elimination of private property and a dedication to mass production was the aim. According to the designer’s ability to create affordable and functional objects for vast markets represented an unprecedented power for social renewal (Parsons, 2016, p.56).

Sales. Nowadays there are even examples of its application in more complex structures such as citizens and government institutions executing design processes as necessary knowledge when making collective decisions. The 27E Region Design Conference of Paraguay transformed the discussion no longer falls on the importance of De- sign and innovation. And these are defined by the subjectivity of the user. According to different literatures, profession is defined only by the limits of our imagination, which are specific to each local. What is the concrete definition of a designer? Where is design implemented? According to the designer’s ability to create affordable and functional objects for vast markets represented an unprecedented power for social renewal (Parsons, 2016, p.56).
The solutions to the complex problems that designers face in the 21st century, that already involve complete societies, must have a visible and real ethical dimension. I emphasise again that the discussion no longer falls on the importance of Design in the construction of the social fabric, but on its scope, repercussions and above all the potential to build better societies.

References


discern to be an inspiration for micro-generation in the community. Given the essential quality, SBAC Hub offering map is created, and it will be the first step to materialize this system. Through observation, field study, and interview, most stakeholders satisfy with this proposition and would like to participate in the co-working process. In the future, the researcher will carry this study and make the Hub be an education-centred participatory platform.

Keywords: design education; community micro generation; distributed systematic thinking; SBAC Hub.

Background

Under the context of the COVID-19 epidemic spread, most of the production had stopped worldwide. During the quarantine period, people from all walks of life have been engaged in telecommuting, and most public areas closed to cut off the transmission route. However, manufacturing and related professions indeed need practical manipulation, and it cannot be assisted by artificial intelligence technology immediately, such as design. According to the Chinese Ministry of Education, cultural activities of human beings can be categorized into thirteen disciplinary categories, in which Philosophy, Literature, and History do mainly satisfy the theoretical section; it is urgent to make up this gap. Based on the epidemic situation, the researcher takes design education as a perspective to discuss the feasibility of transforming education still relies on a practical operation, like design. This study takes design education as a perspective to inquire about the current education model, distance learning, and which suggests a more resilient approach to conduct design and design education. Based on literature and case study, the SBAC Hub concept and its ecosystem are proposed to supplement scholastic education, especially during quarantine time, and it is also an inspiration for micro-generation in the community. Given the essential quality, SBAC Hub offering map is created, and it will be the first step to materialize this system. Through observation, field study, and interview, most stakeholders satisfy with this proposition and would like to participate in the co-working process. In the future, the researcher will carry this study and make the Hub be an education-centred participatory platform.

Keywords: design education; community micro generation; distributed systematic thinking; SBAC Hub.

Abstract

In conclusion we can discern then that objects are a channel of expression of individuals and societies through time; where designers have a pivotal role in the construction of the social fabric. Since the current approach that is given to Design is a tool for the materialization of an idea that is usually conceived to be an inspiration for micro-generation in the community. Given the essential quality, SBAC Hub offering map is created, and it will be the first step to materialize this system. Through observation, field study, and interview, most stakeholders satisfy with this proposition and would like to participate in the co-working process. In the future, the researcher will carry this study and make the Hub be an education-centred participatory platform.

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Literature review

Ji Yong Park (2011) discussed the advantages and disadvantages of operating design education online and took the interactive learning environment as a perspective in Design Education Online: Learning Delivery and Evaluation. The author involved the virtual reality learning environment, the interactive learning experience of the online studio, design learning framework based on the virtual learning environment, interactive learning structure, etc. Park claimed the limitations of information exchange technology: the dissemination of a product or technology may be limited due to bandwidth or content format. Learners are prone to lose their interest in learning in cyberspace when they encounter teachers, which means that the way teachers stimulate and interact with students will determine the effect of online learning. The key to online design education is to create a high-quality interactive learning environment that can lead students to live and study and to define appropriate interactive activities among learning elements. In the end, the author suggested online design education needs to implement various educational values and to satisfy the theoretical section; it is urgent to make up this gap. Based on the epidemic situation, the researcher takes design education as a perspective to discuss the feasibility of transforming design education needs to implant various educational values and to satisfy the theoretical section; it is urgent to make up this gap. Based on the epidemic situation, the researcher takes design education as a perspective to discuss the feasibility of transforming design
Project-based learning (PBL) mode

Rocha Hugo, Ferreira A. M., and Jefferson Manhães (2018) proposed three stages of planning project-based learning: 1. a curriculum-based, problem-based, knowledge-emphasizing cognitive skills; 2. A student-centred environment, small groups, active learning, and project learning; and 3. project-oriented activities focused on developing student skills, motivation, and the eternal passion for learning. Besides, the authors consider the biggest obstacle for teachers is re-adapting to the teaching methods used today.

According to the current research of online learning, the technical issues have been considered the main limitation of this educational model, like the shortage of bandwidth, content format, efficiency and modes of interaction, etc. On the other hand, online learning, as a classic mode in design pedagogy. However, design education has long been influencing since quarantine time, and the condition is calling for an emerging solution.

Methodology

Given the complex context and the specific property, this study intends to examine two methodologies, case study research design, and conducting in-depth interviews. Except online learning, the other approach is to conduct design education during quarantine time? On the one hand, the research regards case study as access to empirical inquiry to discover inspired experience, and related methods include comparative research, secondary data analysis, and visualization. On the other hand, the thinking provides the perspective of the project-oriented activities focused on developing student skills, motivation, and the eternal passion for learning. Besides, the authors consider the biggest obstacle for teachers is re-adapting to the teaching methods used today.

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Case study

The researcher systematically investigates four cutting-edge cases of social innovation and education, of which two located in London and the others in Shanghai. Through comparative research, cases in different cultural contexts have been studied, and this will be utilized to contribute to the generation of a design solution.

1. The Goodlife Center, London

Located beside Tate Modern, The Goodlife Center is a mak er space that provides over seventy workshops all year long to the public, which aims to empower individuals and to expand their abilities. Upcoming classified workshops will be launched on the website, whereas the workshop topics are also attached. Along with workshops, tutors offer customized supervision to help makers to tackle technical problems and finish the objects.

2. The Remakery, London

As a not-for-profit organization, The Remakery was established in 2012 and struggled to endow people with resourcefulness and community with a sustainable way. Through membership participation, makers can choose either to customize their own making or to rent a specific space for workshops and other activities for a more extended period. Varied from pay services, Remakery lends tools and materials, and upon 4Rs principle, which is rethink, repair, reinvent, and redistribute (Figure 1). The 4R can operate both in a linear and closed-loop approach. Take recycling, for example, makers recycle wasted materials from former making activities and make them materialization again by cleaning, polishing, reinforcing, and related procedures. Then, makers do ideation to initiate a systematic solution to reincarnate the material; this step can also be considered as design in handicrafts and engineering area. Next, conducting the solution and tackle the accidental technical problems until realizing the object. Last, distributing the artefacts and communicating the ideas with the public. Besides, individual value and sense of belonging can also be realized by the process mentioned above.

3. N-ICE 2035 Living Line, Shanghai

N-IICE 2035 Living Line is a community micro-generation project in Siping, which occupies a continuous space and has been established since 2020 by N-ICE Community Neighborhood of Innovation, Creativity, and Entrepreneurship towards 2035. The core of N-IICE 2035 is not multiple economy or identity but value and recreation. The 4R can emerge here to make a 15-minute life circle. On the other, N-IICE 2035 is inventing the prototype of a composite future community through the “In, To, With, By” methodology, which indicates the findings of an appointment and bring employment opportunities to the community; providing required solutions to the community; creating the community with community stakeholders; letting the community enhance the creativity by using its resources.

4. NICE Commune, Shanghai

Born in N-IICE 2035 Living Line and supported by the educational institution, NICE Commune is found during quarantine time and to be a communal platform that exchanges information between the community and the outer world, as well as can be seen as a resource integration place, idea incubator, and prototype field of future life. As the newest community micro-generation project in the Siping neighborhood, NICE Commune has been studying and embedding with novel brands like Punchline Café, Foodlab communal kitchen, Gossip Room meeting place, etc. Together with the University, Business collaboration has been established since the 1950s, and facts proved this framework works well in the temporary situation. SBAC Hub provides an opportunity to introduce it into the community and makes it close to everyday life. Thus its transmissibility and influence will iterate.

According to the core, this model transforms professional knowledge for community neighbourhoods, then community rewards academ ia with research scene, observation objects, and other first-hand micro-generative and frequently, daily life seldom gets in touch with advanced outputs; thus a gap emerges between them and makes resource flow not sustainable. To some degree, SBAC Hub acts as a bridge and a catalyst to close this gap, then guides new phenomena to appear. On the other hand, SBAC Hub helps to increase things value through 4R principles, which is rethink, repair, reinvent, and redistribute (Figure 1). The 4R can operate both in a linear and closed-loop approach. Take recycling, for example, makers recycle wasted materials from former making activities and make them materialization again by cleaning, polishing, reinforcing, and related procedures. Then, makers do ideation to initiate a systematic solution to reincarnate the material; this step can also be considered as design in handicrafts and engineering area. Next, conducting the solution and tackle the accidental technical problems until realizing the object. Last, distributing the artefacts and communicating the ideas with the public. Besides, individual value and sense of belonging can also be realized by the process mentioned above.

Discussion

1. Concept of SBAC Hub

SBAC Hub is a platform that embedded in the community and it is also a physical space with accessible directors and tools to help stakeholders to achieve educational goals. Next, SBAC Hub consists of four elements, business, academia, and community. On the other hand, as a platform, the community engages school resource, business, and academia, in to which the four strength inspire from each other and make changes happen in SBAC Hub.

2. Ecosystem of SBAC Hub

There is a framework relating the relationship and flow among school, business, academia, community and SBAC Hub, which cultivates a sustainable ecosystem of micro-generation project in the Siping neighborhood. On the one hand, the community engages school resource, business, and academia, in to which the four strength inspire from each other and make changes happen in SBAC Hub.

Secondly, business supports academia with research funding and materials; academia offers academic resource and secondary data analysis; business, in turn, funds in the Siping neighborhood, NICE Commune, Shanghai; SBAC Hub strengthens the connection between school and business, which reduces the cost of corporation re-crucification and also helps students get in touch with the practical, learning, and teaching environment.

First of all, SBAC Hub is created to be a pedagogical supplement for scholastic education, especially in the quarantine period. Take design education as an example, PBL mode is recognized as an essential pedagogy when students gain practical skills and systematic thinking. Under this condition, Hub can be an educational platform for design students to do extracurricular exercises and research.

Then, the last mile issue has been inspired by various solutions, including the core, the educational platform to students and thus establishes a collaborative relationship. Business people, human resource colleagues, account executives, and other stakeholders. Business people, human resource colleagues, account executives, and other stakeholders. SBAC Hub provides a new place for academic ideation, testing, and reflection, which also shortens the period to realize by accessing the SBAC Hub.

Last but not least, university-industry-research partnership partially covers the production circle, that is to say, leaves out the periods of original requirement finding and connecting to the demand terminal. In this case, the design education in the community as a cultivation environment of requirements is always excluded from the production system, which makes designers challenging to discover the design demand, and the gap between design and production. As a result, there is a gap among users, producers, students, and scholars, which will make the system more integrated. At the same time, the presence of SBAC Hub in the community engages school resource, business, and academia, in to which the four strength inspire from each other and make changes happen in SBAC Hub.

4. Stakeholders of SBAC Hub

As a resource exchange and iteration platform, SBAC Hub continually attracts diverse stakeholders and makes them become the core of the new generation project in the Siping neighborhood. NICE Commune is an educational institution, NICE Commune is an educational institution, and the public as a collaborator. In addition, NICE Commune is an educational institution, NICE Commune is an educational institution, and the public as a collaborator. In addition,
5. SBAC Hub offerings

To respond to diverse requirements, SBAC Hub will prepare for online and offline application scenarios, which will be presented by offering map (Figure 3).

![SBAC Hub offering map](image)

Figure 3. SBAC Hub offering map, created by the author

SBAC Hub offering map is designed by matrix thinking and presented by the dendrogram, the relationship indicates there are software and hardware offerings in online and offline scenarios respectively, and they are mainly established towards school, business, academia, and community stakeholders. Firstly, SBAC Hub online software offerings include courses, projects, professionals, and application software service, which aims to help stakeholders to conduct their works remotely. Then, online hardware asks for comparatively high-tech support, like remote control and digital twin method. This service means to access as being efficiently engaged in manufacturing. Next, offline software offerings consist of diverse occasions, for instance, after-class tutoring, interest class, seminar, meeting, advertising, training class, salon, visit inspection, popularization of science, workshop, etc. Lastly, offline hardware offerings are assumed to be the most commonly used composition, for they are accessible and friendly to most stakeholders. There are four main types of offline hardware provided based on physicochemical properties: 1. metal materials, like ferrous metals, nonferrous metals, and special metals; 2. inorganic nonmetallic materials, like silica aerogel, cement, glass, and ceramics; 3. macromolecular compound materials, include plastic, rubber, and fiber; 4. tools, contain hand-operated tools and electrical tools.

All the offerings can be considered as contacts that link stakeholders with the SBAC Hub service system; they present as abstract or physical forms, through which events will be carried out practically. Besides, offering map is an ever-growing system along with technology iteration and demand change, which ensures Hub always stay renovated.

References

A reference list should appear at the end of the paper under the heading References. All the references should be arranged in alphabetical order. Format the reference list so that each entry has a hanging indent of 0.5 in. Double-space the reference list, including both within and between references. For multiple works by the same author(s) in the same order, place works in chronological order. Place works with no date first, followed by works with dates in order from earliest to most recent. Please follow the examples below (cf. References).

Abstract

This short essay seeks to explore the spheres of influence on human creativity connoted as natural and artificial; and how these framings of ideology are an institutional construct to limit the imaginative capabilities of individuals and society as a whole, in order to maintain status quo power relationships. By assessing the relativity of perception that is core to these propositions, inevitabilities are reframed as points of friction ripe future for engagement by designers seeking to craft more equitable futures through the political efficacy of design. Mindfulness and stillness are put as lines of flight to iterate the potential of ideology-crafting available through the processes of design thinking in order to encourage more equitable actions resulting in challenges to presented realities in the form of post-human post-nature narratives.

Keywords: Natural; Artificial; Stillness; Equity; Design.

Natural Maintenance

What does it mean for something to be considered natural? It inevitably is an assignment coming from a human host, at least that’s the only assignment us humans could understand. I have been watching an American Robin go through the process of building her nest after the first big storm that passed through this adventuring Spring. One of the first pieces she had selected to use for her assemblage was a piece of green, nylon twine, maybe twenty inches long. This human-made element—something that would qualify it as unnatural in a human’s eye—was just as natural to her as was the small maple and oak twigs, wisps of dried grass, and juniper fronds she added to the tool. Not to mention, all of this nest-building was happening under the human is self-perceived as unnatural, this hierarchical relationship of human to non-human is self-perceived as natural. This Anglo-American, Westernized view has come to dominate as a global psyche through the mask of Manifest Destiny, and has led to the systemic oppression of animals, plants, humans, and non-humans alike.

The artificial and the natural are overarching spheres of influence, with the artificial generally being represented through the moniker of society in historical cultural analyses. Of course, there is the question of which came first, society (i.e. the artificial) or nature? Obviously the world and all its potential for contents started existing at some point in time, but in a less dense arrangement of atomic and subatomic parts. So this could be taken, in an extreme sense, as the advent of nature. Yet, if all of this planet’s known matter has, does, and always exist, then wouldn’t that include the potential for, or the artificial, artificial? Yes; and this is where it starts to become apparent that the argument putting forth any sort of division between these two distinct spheres that are self-contained in another is from an entirely humanist perspective. As the separation of these two realms is only voice in order to give separation to the human from the natural world. Yet, the poles can never
be separated, can never be removed from each other, for the di-
dactic would be broken if one pole subdued the other. Though,
is this not just the forward momentum of society? The perpetu-
al assignment of the potentiality of natural and artificial—these
two entities that are like the theoretical one-to-one map cover-
ing the kingdom (Eco, 1994), but being made to infinitely shift
between these two identities based upon the needs of the sov-
erign’du jour. This inability to trace a consistency in assigning
these values of natural or artificial asserts the relativity of the
assumption, and the capacity for imaginations to utilize these
tools toward crafting power inequalities that systematically op-
press the commons and maintain the status quo.

Robins had hatched from its egg. It was holding a pose of still-
ness: pressing its body down into the spaces between the eggs
and about, hunting night-crawlers driven to the surface by the
animals, plants, rocks, territories, districts, networks, or com-
puters. But again, even the idea of extending agency to these
two entities that are like the theoretical one-to-one map cover-
ing the kingdom, with each able to take the place of object/subject on either side
of the ratio interchangeably, then there are no inequalities. A society
where more voices are heard can only result in a more cultural-
ly diverse and dense expanding and overlapping of the natural
and artificial spheres. This added complexity is more represent-
ative of the real, and lends itself toward lowering the threshold
for engagement with culture and the added this power lends this
to the individual as enacted through groups. By forwarding the
grayness of the real over the polarity of abstraction, cultural
opportunity to take an absurd multitude of captures in such
frames the radicality of the change better—occurred? It’s like
this tactic would free it from its hunter. This dialectic between hunter and hunted is a great manipu-
lator of the psychic sense determining the perceived boundaries
of the natural and the artificial. Gregoire Chamayou (2012) does
an excellent job in his book Manhunts: A Philosophical History,
of describing the natural and artificial natures invoked by this
relationship. This hunter and hunted narrative would seem
to dovetail nicely with the perceived threat has diminished
in artificial and natural. Regarding predators and prey, I’m cu-
rious as well how this relates to the ideas I’ve been developing
toward my concept of Accelerated Stillness. Stillness is a nat-
urally occurring—at least as far as humans perceive its place-
ment in the Romantic sphere of nature—action that manifests
as a difference of degree, rather than of kind, in terms of direct
use. The hunt as a mode to maintain camou-
flage in order to stealthily approach its prey, practicing stillness
until the moment when the predator perceives it is within a rea-
sonable range of the odds are favorable enough

to encourage an intensity of direct, outward action. Of course,
this hunting process allows for a wide spectrum of approaches
that riff on this overall structure—but stillness is still a core tool
of the hunter. Stillness also is a core camouflaging approach
utilized by the hunted. Except in this action, the desired effect
is to practice stillness until the perceived threat has diminished
to where less stillness is considered safe, or to where the perceived threat has intensified to the point where danger-prox-
imity has caused a flight response the best gamble in
terms of life persistence.

Now, I’m curious about the aesthetics surrounding an indi-
vidual body. Actions of encounter and engagement body out
of what it conceives as itself, as either natural or artificial. The
reason of course being that if the sensations experienced by
our body exterior inputs are what is driving respective percep-
tions of the world then these aesthetics must be the catalysts
for our own relative assessment of a thing’s naturalness or arti-
ficialness. So, what then types of aesthetics denote these des-
ignations? At first glance, it might be as simple as ascertaining
whether a thing is human-made or not. But then of course there
are a number of hurdles encountered in that logic, e.g. traits and
glyphs on the supermodel shell, in Chicago, in April, the result of globalization and advances in agricul-
tural technologies. Already we can see the paradoxical overlap-
ping of the nature and artificial spheres, particularly in our infor-

mation-overwhelmed, panoptic existence, where we know how
to utilize deconstruction to uncover the hidden networks result-
ing in a “singular” thing. And we haven’t even started to dig into
the rich soil of these thing-substrates with more than our fingers.
So, maybe the more effective line of questioning is in regards
to whether in the year 2020 there really is any separation be-

between natural and artificial, and the potentiality that individu-
al things have ceased to exist, and now only exist as network
things—perhaps a “thing” is an interesting semiotic twain in its
visual and sonic nearness to the word “nothing(s)” in de-
scribing these bodies that are no longer things, but instead
a perceived network of thingness. So why has a shift from thing

to net-thing—and probably a shift in kind rather than degree
frames the radicality of the change better—occurred? It’s like-
ly largely a result of postmodern thinking maneuvering in
to common culture, coupled with the neoliberal socio-econ-
omie shifts that drove globalisation and the rise of the availability
of internet access, as well as its widespread adoption and utili-
ization as an information gathering and spreading tool. As such,
humans have largely been key into the concept of network
production and maintenance. This intensification in information
given by a experienced individual in a lifetime has led to an
increase in the likelihood and diagnoses of mental disorders in
humans—in largely Westernized societies. Now, is this net-
thing—or maybe Timothy Morton (2013) might say Hyperob-
ject—natural or artificial? It’s likely a natural psychic response
to our contemporary, postmodern, neoliberal condition—our
bodies alerting us that something ironic/ Right with our situation
and we should seek an environment more conducive for sur-

vival. Yet, the artificiality of a socio-economic system based up-

on the oppression of bodies and the creational excesses at the
cost, environment must be questioned. 

So, maybe it is a problem of imagination? Or rather, the
limiting of imaginations by institution?

Acknowledgements
Thank you to Dr. Giovanni Aloi (The Art Institute of Chicago) for his guidance.

References
Abstract

The objective of the paper is to define the specifics of reflexive culture in architecture science and education. Current relevance. The need to address reflexive culture is dictated by the following reasons: first, the need to find common grounds between architectural science and architectural education, which still exist separately in Russian architectural education practice; second, the need to develop pedagogical disciplines, which compel to reconsider the design teaching process; and third, the need to introduce the notion of «architectural pedagogy» into architectural science and architectural education. The reflexive learning paradigm includes perspectives on reflexive learning researching, project method, critical thinking and reflexive learning in architecture and art education. Conclusions. Reflexive culture is an important constituent part of architect’s professional culture. The category of reflexive culture may serve as a channel for introducing architectural pedagogy or the notion of architectural bionics. We can rely on the ideas of A. Collins and others. In our approach, we consider reflexive culture as its constituent part, for instance, discussion of an architectural project by several teams of students, each of which has its own analytical task. Reflexive learning helps students become aware of their uniqueness and find their place within cultural and educational processes. Within the range of reflexive learning techniques for professional thinking, we can distinguish several most significant ones for architectural education, such as reflexive play, as a subject-matter for studies in higher learning pedagogy. The structure of the reflexive educational environment presents a set of «information, meaning, social, material, technological, architectural» components (Malakhov, 2006). The reflexive educational environment helps students become aware of their uniqueness and find their place within cultural and educational processes. Critical thinking in reflexive techniques for architectural student education. The development of critical thinking in architecture students helps shape a professional design culture in them. The professional cultural knowledge includes the skills of managing one’s own thinking and ability to engage principles of critical thinking in architectural activity. Being systemic and critical is integral to architectural thinking. Studying thinking and learning problems that reflexive techniques could bring into architectural teaching practice. However, this is a theme for a special study.

Introduction

The category of reflexive culture could be helpful in understanding interdisciplinary relations between architectural education and higher learning pedagogy. It could provide a basis for developing advanced architectural design teaching techniques in perspective. Is there a relationship between architectural science and architecture education? Could the category of reflexive culture help unite architectural science and teaching practices?

General higher vocational pedagogical and architectural pedagogy as a specific domain of architectural or urban planning education have particular features of their own. Architecture teaching methodologies need to develop empirically over the long history of the architectural profession. At the same time, general pedagogy followed its own way. Are the teaching methods elaborated for general pedagogy used in architecture teaching? What could be the role of reflexive culture in this area?

The category of reflexive culture could be helpful in understanding architectural science and architectural education. Studies in this area are conducted, as a rule, by architects who combine practice with teaching. The reflexive learning paradigm includes perspectives on reflexive learning researching, project method, critical thinking and reflexive learning in architecture and art education. Conclusions. Reflexive culture is an important constituent part of architect’s professional culture. The category of reflexive culture may serve as a channel for introducing architectural pedagogy or the notion of architectural bionics. We can rely on the ideas of A. Collins and others. In our approach, we consider reflexive culture as its constituent part, for instance, discussion of an architectural project by several teams of students, each of which has its own analytical task. Reflexive learning helps students become aware of their uniqueness and find their place within cultural and educational processes. Within the range of reflexive learning techniques for professional thinking, we can distinguish several most significant ones for architectural education, such as reflexive play, as a subject-matter for studies in higher learning pedagogy. The structure of the reflexive educational environment presents a set of «information, meaning, social, material, technological, architectural» components (Malakhov, 2006). The reflexive educational environment helps students become aware of their uniqueness and find their place within cultural and educational processes. Critical thinking in reflexive techniques for architectural student education. The development of critical thinking in architecture students helps shape a professional design culture in them. The professional cultural knowledge includes the skills of managing one’s own thinking and ability to engage principles of critical thinking in architectural activity. Being systemic and critical is integral to architectural thinking. Studying thinking and learning problems that reflexive techniques could bring into architectural teaching practice. However, this is a theme for a special study.

Reflexive Culture in Architectural Science and Education

The objective of the paper is to define the specifics of reflexive culture in architecture science and education. Current relevance. The need to address reflexive culture is dictated by the following reasons: first, the need to find common grounds between architectural science and architectural education, which still exist separately in Russian architectural education practice; second, the need to develop pedagogical disciplines, which compel to reconsider the design teaching process; and third, the need to introduce the notion of «architectural pedagogy» into architectural science and architectural education. The reflexive learning paradigm includes perspectives on reflexive learning researching, project method, critical thinking and reflexive learning in architecture and art education. Conclusions. Reflexive culture is «organization of reflexive processes in the course of analysis of activity in subordination to criteria of intellectual and axiological types» (Anisimov, 2002). An important factor in understanding reflexive culture is the establishment of criteria behind reflexive process organization. A prerequisite to the development of a reflexive culture in architecture education could be the availability of reflexion skills and abilities. Thus, the criteria of reflexive process organization in architectural science could be architectural concepts, theories, notions, categories, as well as ideals and values of this or that historical period. In addition, notions from other scholarly disciplines should become such criteria if implanted into the domain of architectural science (for instance, the notion of architectural pedagogy or the notion of architectural bionics). We can rely on the thoughts of A. Sharov and others. An effective educational process and architectural education could involve the assessment of «intra-professional» reflexion of critical thinking and awareness of it as a special phenomenon.

Categorization of reflexive process organization in architectural education

Reflexive techniques in architecture student training represent, in fact, criteria of reflexive process organization in architectural education. The reflexive learning paradigm includes perspectives on reflexive learning researching, project method, critical thinking and reflexive learning in architecture and art education. Conclusions. Reflexive culture is «organization of reflexive processes in the course of analysis of activity in subordination to criteria of intellectual and axiological types» (Anisimov, 2002). An important factor in understanding reflexive culture is the establishment of criteria behind reflexive process organization. A prerequisite to the development of a reflexive culture in architecture education could be the availability of reflexion skills and abilities. Thus, the criteria of reflexive process organization in architectural science could be architectural concepts, theories, notions, categories, as well as ideals and values of this or that historical period. In addition, notions from other scholarly disciplines should become such criteria if implanted into the domain of architectural science (for instance, the notion of architectural pedagogy or the notion of architectural bionics). We can rely on the thoughts of A. Sharov and others. An effective educational process and architectural education could involve the assessment of «intra-professional» reflexion of critical thinking and awareness of it as a special phenomenon.

The project approach in architectural education: historicity and cultural situation

The project approach in architectural education is understood as the use of projects as the main tool of educational practice and as a collection of ideas about project-based activity in pedagogical science. Interest in projects as a didactic method first emerged in the United States when J. Dewey and W.H. Kilpatrick developed the «21 project» idea based on the philosophy of pragmatism. Essentially it is a practice-oriented approach to teaching and learning, reflexive thinking and modeling; classification of teaching and learning methods based on the reflexive approach (I.G. Lipatnikova, E.N. Arbuzova, G.I. Davydova, A. Sharov and others). It should be emphasized that reflexive learning as a scholarly category has not been considered in much detail in studies devoted to Russian architectural education. Reflexive teaching includes reflexive questioning and statement of a reflexive cognitive problem. Reflexive learning implies taking the student through activities directed at developing reflexing abilities and skills. One of the forms of reflexive activity is self-assessment, for instance, assessment of one’s term, architectural design against the principles of sustainable development.

In addition to test and assessment, reflexive teaching and learning includes an individual component. The idea of «individualization of the reflexive approach implies that reflexive individualism is a subject-matter for studies in higher learning pedagogy. The structure of the reflexive educational environment presents a set of «information, meaning, social, material, technological, architectural» components (Malakhov, 2006). The reflexive educational environment helps students become aware of their uniqueness and find their place within cultural and educational processes.

Within the range of reflexive learning techniques for professional thinking, we can distinguish several most significant ones for architectural education, such as reflexive play, as a subject-matter for studies in higher learning pedagogy. The structure of the reflexive educational environment presents a set of «information, meaning, social, material, technological, architectural» components (Malakhov, 2006). The reflexive educational environment helps students become aware of their uniqueness and find their place within cultural and educational processes.
ly accessible because it combines intuition, science and art. A. Collins and J. Dewey were the first to voice the idea of pedagogy as consultant (Tornina, 2011). Project-based learning came to Russia after the 1917 revolution when school faced the challenge of educating society based on the ideas of socialism and collectivism. In the 1920s–30s, E.G. Kagarsva, M.V. Kruptena, N.K. Krupteska, A.S. Makarenko and S.T. Shatsky laid the key theoretical and methodological foundations. Other methods developed by international colleagues were also taken on board (Dalton Plan, project method). New techniques were also developed independently: method of real-life tasks, team-laboratory system and other. In using the project method, attention was paid not only to personal orientation but also to the importance of the projects for society. However, while the project approach was effective in raising creative, morally healthy and socially oriented personalities, fundamental scientific knowledge was found to be at a disadvantage. In 1932 the project method was banned (Shevchenko, 2004).

In the 1960s–70s, V. Ya. Dubrovsky, G.P. Shchedrovitsky and O.I. Geniarskaya, who worked at VNIITE (Institute of Technical Esthetics), continued research into the project approach with reference to design. Then A.V. Rozenberg developed a methodological framework of the project-based approach in design under the supervision of K.M. Kantor and presented their ideas in the publications «Philosophy of Architecture» and «Norm-Setting in Building Construction».

In the 1980s, the theory of architectural education in Russia was focused on the construction of an innovative teaching and learning model based on the ideas of the project-based, problem-solving and personality-development methods. This work resulted in research works published by А.В. Степанов, А.П. Кудрявцев, Д.Л. Мелодинский. They formed an avant-garde of the pedagogical thought and a source of inspiration for experimentalists and theoreticians among teaching staff in the sphere of architecture and city planning.

Conclusions

Russian architectural education should be up to the modern-day challenges in the rapidly changing world, particularly in relation to architectural activity and urban planning practice. Consideration of the category of reflexive culture in architectural science and education is an important stage in the emergence of a new scientific knowledge. The specifics of reflexive culture is that it unites the notions of reflexive learning, critical thinking and project approach. Reflexive culture would enable architecture students to become aware of their uniqueness and find their place in culture.

Abstract

Ideation is sometimes being used interchangeably with the same meaning as ‘idea generation’, and some other times it is not. While this is not a significantly major problem, it worth noting that because of it, literature can lack clarity at times, being unclear what it is being meant. The author claims that these two terms are not synonymous, as idea generation refers to the production of ideas. In contrast, ideation refers to two concepts simultaneously, (a) the production of ideas as well as (b) evaluating and making a decision on which ideas to be processed further.

Keywords: Ideation, idea generation, education, ideation, creativity.

Ideation vs Idea generation

Ideation and idea generation are two popular terms used by design scholars and design authors. Ideation is a phase in the design thinking approach which involves idea generation and idea evaluation. Idea generation is simply the generation (in other words, production) of ideas. Idea evaluation is making a judgement whether the ideas are good or appropriate. Despite ideation and idea generation being two different terms, they are often confused and used interchangeably with the same meaning. This type of incident is problematic as literature becomes inconsistent, making reviewing more challenging and time-consuming. This paper raises the issue, and it addresses concerns regarding the confusion caused by this.

It is undeniable that designers ought to generate ideas when they pursue design work. Envisioning solutions, improving situations, and addressing problems, is what designers do. Offering these things requires creativity, coming up with many ideas as well as testing good ideas. It is widely accepted that design professions are considered creative. No one is born as a fully-developed, professional designer (Stoltner & Nelson, 2012, p. 215). Every designer must go through a design education process, offered by various means and forms of education, typically in a university or some vocational school. Arriving to design through other fields without attending a proper design school (e.g. anthropology, marketing, advertising, or others) can also be considered indirect design education. Furthermore, learning to become a designer has been described as a process of never-ending becoming (Stoltner & Nelson, 2012, p. 237).

Design education is supposed to transform design students into professional designers. This transformation includes developing a wide range of professional skills, many of which are relevant and appropriate to the twenty-first century. Skills such as creativity, imagination, problem-solving skills and innovation skills (Moseley et al., 2020) are being cultivated and grown at design schools. In other words, design students develop a skillset (which can be described as a toolbox), and it includes a range of skills like the skills mentioned above. Idea generation can be considered one of these skills.

Idea generation is frequently attributed as a component of creativity. Creativity is often defined as novel and purposeful, and many scholars typically refers to generating and evaluating ideas as creativity. However, purposefulness typically refers to how appropriate or suitable the ideas are. Idea generation falls into the concept of novelty, as the ideas are thought or suggestion of a plausible future action in the future. Regarding possibilities that have not happened yet, is an action of envisioning or fantasizing, which involves imagination. Imaginativeness and novelty, despite being two different concepts, they are highly relevant and can be considered as distant synonyms.

In the academia, some many scholars and designers are studying design in a scholarly manner, advancing the design field and gradually making design an increasingly more academic field. Academic in this context refers to the research...
Creative Industry

Idea generation vs. Idea generation. What is the Difference?

As mentioned earlier, creativity is one of the characteristics of designers and also a significant skill being trained at design schools. Creativity in design education research is gradually becoming more popular, even though (mis)understanding of creativity in design research is mostly discussed by psychologists, and a large number of publications (academic and non-academic) is focusing on creativity and design education. However, it is not always clear what the terms mean to them. Regardless of the lack of such an explanation, it means Wrigley and Straker have a clear understanding of the title of the profession is. Similarly, in the academic design literature, it becomes challenging to comprehend the intended meaning and avoid any possibility of confusion.

The confusion between idea generation and ideation is not a significant concern or a problem that needs to be urgently addressed. The confusion happens mostly when these terms are in their infancy or conception. However, being a designer and also a significant skill being trained at design schools, it is endemically concerning to produce a high volume of ideas, that may or may not be paid on how the terms are contextually being used (especially in the case of ideation), to make sense of them and comprehend the intended meaning.

As such, by using the definition mentioned by Stickdorn et al., idea generation does not involve evaluating ideas, it is only concerned with producing a high volume of ideas, that may or may not be applicable or considered as part of the solution. The process where ideas are being generated and then evaluated. By evaluation, they mean ideas are being judged, resulting in the bad ideas being discarded and the good ideas being kept for further development. According to a model presented by (Stickdorn et al., 2018), there are two phases in ideation. The first one being idea generation, in which the goal is to produce as many novel ideas as possible. The second phase is idea selection, a convergent phase in which people must make decisions. Ideas are going through a vetting and elimination procedure to select the seemingly better ideas.

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Design in the Digital Era: the Balance Between Technology, Creativity, and Culture

Abstract

The contribution aims to reflect on the impact of digital transformation in the production of cultural and creative content, design assumes a significant role within this scenario, as it has always been a link between technology, market and society. Design is an articulated system of values deeply rooted in the economic, social and therefore cultural fabric of the places where it stems. New technologies will produce a disruptive impact, as they tend to merge the physical and digital world, constantly and irremediably. Yet digital culture cannot ignore the involvement of the cultural industry, which acts as a portal between the physical world and cyber hyperspace, material culture will be playing a fundamental role in which design crystallizes the “forms of making”, translating them into the “shapes of living” in a new, automated world. In fact, as software has been eating the world in the past decades (Andressen, 2011), automation is now taking stage, establishing a new generation of integrated systems, filled with machine-to-machine interactions: mankind will soon be immersed in a machine culture where machine interactions, which will require a rethinking of the different socio-cultural categories: subject, action, intention, responsibility, cognition, work. In this scenario, design will play the role of catalyst of new meanings among the creative industries, as it moves from making stuff to making something (Sanders & Stappers, 2013); design transforms innovations in new socio-economic and strategic discourse, committing now to search for new validities while the relationships of the future unfold.

The contribution aims to reflect on the role of design in the ecosystem that sees the production of culture and creativity borrowed from technological development, taking into account that, if the cultural and creative industries traditionally operate according to a concentric circular model (Throsby, 2008), technology introduces a third dimension of depth: within a multi-dimensional space, design assumes the role of connector and catalyst of ecosystemic-managerial, technological, socio-cultural and aesthetic communicative knowledge.

Keywords: cultural and creative industries; design culture; aesthetics society; digital transformation; innovation; design culture; digital revolution; Made in Italy manufacturing; digital transformation.

Introduction: the culture-creativity interplay and the role of new means

In recent years, the theme of the relationship between cultural and creative industries (CCI) has assumed great importance, in the context of a new world order (Flyvbjerg, 2009; Flew, Cunningham, 2013). Studies show that the boundaries between Cultural Heritage and creative industries are to be understood as blurred and permeable since they seem to allow the passage of a cultural product from one aggregate to another. Therefore, when we study the theme of the creative industry, it is evident that this cannot ignore the involvement of the cultural sphere as well. In this regard, the result of the 2006 EU / KEA Report can be significant, highlighting the instrumental correlation between the cultural and creative industries (KEA, 2006). The report brings out the notion of culture-based creativity: “creativity does not happen inside people’s heads but in the interaction between a person’s thoughts and a socio-cultural context. It is a systemic rather than an individual phenomenon” (KEA, 2006). Hence, following a systemic perspective, technological means contribute to shaping the languages and models of contemporary society, as well as its creative productions. Technology expands the individual’s faculties remodelling the conditions of the world at practical, cognitive and emotional level.

Design assumes a vaguely paradoxical role in the ongoing technological revolution. On the one hand, the creative industry (2019) is the product of seamless and complex interactions between media and tools, whose “use in this context results not only in the production of contents but also in their promotion and communication. Specifically, the production and presentation of creative contents are the basis of the economic and cultural functioning of the aesthetic society, in which design plays a central role. Positioning itself as a means of cultural production (Manovich, 2019), the design feed the creative industries and vice versa, triggering a continuous cycle of identity and experimentation of contemporary cultures.

Indeed, the creative industries operate through a process whereby the cultural resources available in any medium are understood as blurred and permeable since they seem to allow the passage of a cultural product from one aggregate to another. Therefore, when we study the theme of the creative industry, it is evident that this cannot ignore the involvement of the cultural...
Design in this ecosystem

Within this system design assumes a dual and controversial role. On the one hand, Design action is consolidated in the elaboration of a future that brings people together to the cultural world (as evidenced by the area of design for cultural heritage). On the other hand, the product of design is becoming an essential tool for introducing scientific and technological innovations in the practice of everyday life” (1995). Therefore, it has the potential to be a vector of innovation, transforming them into shared values and meanings, introducing new forms and expressions of culture into society. Design thus becomes a vector of the precise moment of “now”, in which the past is handed over to the future.

In this context, culture, knowledge, and cognitive skills have become the main generators of value not only to improve the productivity of an economic system but also to transform the relationships from the relationship between culture, creativity and technology. In this terrain of design-driven innovation, economic value is produced by generating meaningful content (Verganti, 2009).

Indeed, Made in Italy proves to be a system in which innovative dynamism exists precisely due to the ability to produce and absorb content from cultural and creative supply chains.

Cultural and creativity in the new technological horizon: Made in Italy as a testing ground

In the Italian context, one of the most significant areas of contamination between culture, creativity and technology is the so-called “made in Italy phenomenon”. As an example, Made in Italy is significant as well as the man-technology binomial, which therefore the culture — of “form” has vital importance in Made in Italy manufacturing system, where design has an increasing role not only in materializing ideas but also in guiding and managing innovation.

The growing relationship between designers and generative technologies of complexity: products are now multi-functional, multi-technology, multi-interaction, lying in a multi-domain reality, in which combinations throughout the supply chain network, rather than in traditional craftsmanship from the ancient workshops. As an example, Generative design algorithms calculate thousands of different combinations for products — their formal aspects — risks to be left out, it emphasizes the importance of the material dimension is the place where designers encounter the creative innovation challenge?

Well known long has been a matter of discussion since every technological advance is historically paired with the evolution of design approaches, theories and practices (Papane, Papane, 1973 in Scodeller, 2019) already envisioned a condition of autonomy of computer systems within design, as they would facilitate the operations and therefore reduce its output to an assembly of pre-packaged components.

The spread of new generation technologies and the advancement of digitization have produced a significant impact on the creativity of the creative industries (Made in Italy too), as they act directly on the languages and information from which representations of reality arise. Culture produces not only a form of “innovation” but also a “feedback loop” between the cultural domain and the world of innovation, translating technological progress into new products and services. As Bonsignore and Bonaccorsi already pointed out in their paper “Made in Italy: An Engine of Kokoschka’s Romantic Landscape (Maldonado, 2001), during this evolution path, design shifts its disciplinary domains on the purpose of the design activity rather than on the object of the project: in the design of the industrial model, the inside design, interior design, visual design, etc. to “experience design”, service design, etc. (Sanders and Staresinic, 2009, 2011) are asked to imagine the world and how it could be lived, transcending the intuitive to the “cultural” component inherent in human artifacts: in a world constantly shaped through and by design, it is important to question the future, not just in the past.

The result of these tendencies is an increase in the use of digital systems in design and management tools to develop and design products that are specific for an important value from innovative knowledge transforming them into “new utilities” (Rullani, 2008); with its close relationship with the cultural heritage, innovation, transforming them into shared values and meanings, cultural and creative synthesis requires a transversal application of technology and optimization of the manufacturing process. Examples of these processes (Cianfanelli, 2019). Moreover, in the use of data analysis and artificial intelligence for trend forecasting or custom analysis. As an example, Generative design algorithms calculate thousands of different combinations for products — their formal aspects — risks to be left out, it emphasizes the importance of the material dimension.

Conclusions

The Italian manufacturing systems brings meaningful arguments to the discussion, thanks to a designing tradition deeply rooted in the cultural context where it stands as the result of both local memory and site-specific features. The Italian production culture has its roots in Art historia and craftsmanship: design in the modern era, made in Italy is not only a productive and economical phenomenon, but also a cultural phenomenon, an element that is a source of meanings and values. Each new technology is configured as an agent of change, defining and building collaborations and opportunities.

In conclusion, the technology effectively to respond to change quickly. This is well represented by the Italian manufacturing system, where design has an increasing role not only in materializing ideas but also in guiding and managing innovation.

Technology drives innovation along with a “smart” productive economy, where its adaptive dynamics entwine with syneesthetic experience and tacit knowledge: this results with the evolution of design approaches, theories and practices (Papane, Papane, 1973 in Scodeller, 2019) already envisioned a condition of autonomy of computer systems within design, as they would facilitate the operations and therefore reduce its output to an assembly of pre-packaged components.

In Made in Italy seems to fit correctly in this scenario as its cultural tradition is the result of a dialectic play between the transmission of design approaches, theories and practices and the growing intervention of immaterial culture in the establishment of new levers for value creation. Made in Italy identifies in emerging trends, where knowledge and information-computational processes merge, generating multi-
dimensional dynamics that alter the design processes and the very genesis of value. The physical world merges with the virtual one, and the knowledge generated by the relationship between creativity and culture assumes a primary role for the management and cooperation between human actors and machines.

The future of the creative industries is thus linked with the diffusion and adoption of new digital technologies, which will have increasingly disruptive functional implications not limited to the artistic and cultural sectors. In this sense, the depth and breadth of the practices and knowledge of the design culture itself will find more and more interest in the study of contemporary society, in its implications and new cultural paradigms, but also its critical approaches towards the future.

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Le industrie culturali e creative e l’Italia: una potenzialità inespressa su cui scommettere. IlSole24 Ore, Milano, Italy.

Le industrie culturali e creative e l’Italia: una potenzialità inespressa su cui scommettere. IlSole24 Ore, Milano, Italy.
Design and Māori Values: a Rebrand Project for the Social Enterprise Sector

Abstract
This paper details a rebrand design project developed for a non-profitable organization called Te Roopu Waiora (TRW), which is currently located in Auckland, Aotearoa New Zealand. This social enterprise is dedicated to supporting the Māori community living with sensorial, physical and intellectual disabilities (whānau hauā). As part of a year three bachelor design brief, the rebrand project enabled students to reflect on Kaupapa Māori principles and appropriately address the values of the organisation. As such, the methodology used a pragmatic paradigm approach and mixed methods design practices involving a human-centred design to problem solving. As result, the student project culminated in a range of cohesive design artefacts, aiming to improve the rentability and perception of the brand with the audience and stakeholders.

Keywords: Design in Aotearoa New Zealand, Kaupapa Māori, branding, design education, human-centered design.

Introduction
Te Roopu Waiora (TRW) is a non-governmental organisation (NGO) located in Auckland, New Zealand. It is a unique Māori organisation that has implemented several social projects to improve equity for people with a range of impairments outside and within the Māori community, the native people of New Zealand who arrived in the country between approximately 1320 and 1350. TRW’s current focus is the project Te Tohu Whakawaiora, which provides health learning materials for healthcare providers working alongside people with disabilities. TRW follows the values of Ata (with care), He Wā (in rhythm), Hihiri (with energy) and Hāora (breathing life). TRW describe themselves as creative problem-solvers who are leaders in Māori health awareness. However, like many NGOs, their governmental funding is neither stable nor sustainable enough to allow them to upgrade their resources for whānau (community) support.

The design brief acknowledged the inequitable employment reality of people with disabilities in New Zealand and it asked designers for a communication strategy to reposition the brand under a social enterprise sector. Making a transition to this sector is an attractive prospect for this organization, as it provides certain independence and opportunities and impact the future of their whānau and community. The transition to a social enterprise allows TRW to maintain their social status as a charitable non-profit organisation while becoming financially free through various business endeavours. Under these parameters, TRW could offer disability training services to businesses and companies, allowing them an income rather than dependence on public donations and governmental support. A brand repositioning could positively influence public perception of the brand, improving funding, employment opportunities, independence and support for the whānau hauā (Māori with a disability). However, the project required an appreciation of Kaupapa Māori and a knowledge of design for accessibility in response to the social and cultural position of the organization. Kaupapa is a Māori concept that considers a group of ideas, principles and philosophies that functions as aspirations for a community. The goal was to create a brand to reflect the identity and values of the organisation, and to encourage a sense of belonging and participation of whānau hauā in the wider society.

Whānau hauā (Māori with disability)
Whānau hauā is an alternative indigenous approach to disability and introduces a Māori perspective to disability. Whānau hauā is used as an umbrella term to represent and refer to the people who are and relate to Māori living with disabilities. Metaphorically, whānau hauā means “the wind that propels whānau with members who have a disability” (Hickey & Wilson, 2017, p. 82). Here the Māori word whānau refers to the extended family network they are living with or outside of the home. It is also
Social entrepreneurship and brand perception

TRW’s positioning as a social enterprise requires a method- ology of entrepreneurship appropriate to the context of a Māori health-service organization. Instead of external funding, TRW would rely on support by securing contracts and trading disability services. According to Besharat and Smith (2014), a determinant of whether a non-profit can tran- sition successfully to a social enterprise depends upon the hybrid of social and commercial elements. By blending the two elements, the organisation would become a socially innovative mix, attain- ing the intrinsic value of financial independence, whilst main- taining the much-needed social vision of addressing equitable ac- cess and employment within the whānau hauā community.

Perey and McLean (2006) argue that revenue in such or- ganisations generates benefits for the community as opposed to shareholders. This model experiences the 93% high- er prevalence of disability than other ethnic groups at 24% (Stats NZ, 2013). Physical impairment is the most common and prominent limitation for Māori with disabilities. For an estimated 404,000 people (43% of the disabled popu- lation), a physical limitation was either their only impairment or was more limiting than the other impairments with which they were living (Stats NZ, 2013). The prevalence of having unmet needs to see a healthcare professional were higher for Māori with disabilities for all age groups except over 65 years (Ministry of Health, 2018).

The prevalence of having unmet needs for special equip- ment was higher for Māori with a disability than non-Māori with a disability for all age groups except children under 14 (Stats NZ, 2013). Of those who needed services that non- Māori are receiving more support for, their disabilities come from some form of disability, and the majority have problems acquiring the sup-port they need. These statistics indicate the urgency to improve the ways that supportive organisations reach out to consumers. Ex- periences such as these have called attention to the medical and social consequences of disability, with Māori facing inequities when receiving health services.

TRW’s employees experience their work environment as a form of disability, and the majority have problems acquiring the sup-
port they need. These statistics indicate the urgency to improve the ways that supportive organisations reach out to consumers. Experiences such as these have called attention to the medical and social consequences of disability, with Māori facing inequities when receiving health services.

Māori are receiving more support for their disabilities, while with a disability for all age groups except children under 14

er prevalence of disability than non-Māori with a disability

1er prevalence of disability than other ethnic groups at 24%

eral organisation to serve all types of disability

For this project, the values (Āta, He Wā, Hihiri, and Hāora), the concept of weave-

The koru represents new life and potential. It is the initial

As the primary colour of TRW, Green was inspired by pounamu (a precious stone also known as greenstone) val-
to the social enterprise sector. Nevertheless, intensive research was carried out through qualitative and quantitative data into brand perception and contextual cultural understanding to identify suitable design, Kaupapa Māori values. The dual sense of professionalism and approachability were conveyed through minimalist shapes and rounded edges, reflecting the concepts of the Māori and weaving values. The brand perception and contextual cultural understanding to identify suitable design strategies to achieve this goal.

Acknowledgment

We would like to acknowledge the deepest appreciation and gratitude to Te Roopū Waiora, and express our respect for the extraordinary service and professional approachability of the four TRW values, including a rebrand strategy exercise. S. Grech & K. Soldatic, Ed., Springer, 2016. The importance of the appreciation and acceptance of cultural and ethnic diversity from whanau hauā of social design and design for disability under whanau hauā framework.

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Generative design with Generative Adversarial Networks

A group of design students from different creative areas, including graphic design, industrial design, product design, and interactive design, participated in this workshop. The participants were divided into five teams based on their skills and interests. Each team was composed of two main sections, a work area, and a side menu (see Fig. 1). Within the work area, users can drag and drop the nodes needed to build their GAN.

Tool

To facilitate the process, we developed an internal tool called GANStation (GANStation) (Chacón, 2020). This is a tool created to assist the user in the design and training of GANs in a graphical environment. A node-based interface was adopted due to the specific conditions previously selected in the workshop. This interface presents programming logic in a convenient way, specifically through the use of blocks, which facilitates the process. Even though the use of blocks in the GANStation interface is easy to visualize, it is necessary to define the complete structure and elements necessary for the use of the tool. This is a particularly important feature for users and participants who did not have any previous knowledge of the subject. To develop the tool, Python 3.7 and Anaconda were used to generate the environment, and PyPi was used for the installation of the necessary libraries. This interface provides an easy way for users to generate new domains or “designs” based on a set of images previously selected in the workshop. The tool also presents elements related to the visual evaluation of the images resulting from the process (Fig. 3). At the end of the evaluation, the students continued to generate a workflow for the design and training of generative adversarial networks. This workflow can identify advantages and make of these resources in their design process.

Conclusions

This workshop was a prepared environment with the necessary instructions to design and train generative adversarial networks and utilizing machine learning models to generate graphical elements. Participants in the Workshop have proved that designers without prior knowledge of programming and machine learning can understand the process better and make decisions about the possible negative impact of this type of derived method of machine learning on the traditional design process. The team carefully analyzed the students’ comments on the process, especially the comments of students without a background in generating or implementing programming or new code. Although some students may not have full knowledge of the novelty of these techniques, the workshop team identified some uncertainty about the possible negative impact of this type of derived method of machine learning on the traditional design process.
Regarding the improvements of the project for its next iteration, the team aims to simplify the tool used during the workshop. In particular, we seek to facilitate the automation of the generation of services based on the models that result from the training process. Providing designers with the possibility of outputting generators, web services or applications as their final result.

References


Towards Interactive Approaches for Information Searching in Mixed Reality

YIWEI ZHANG
Tongji University
zhangyiwei@tongji.edu.cn

XIAOHUA SUN
Tongji University
sunxiao@tongji.edu.cn

YATE GE
Tongji University
gyate@tongji.edu.cn

HEXIN ZHANG
Tongji University
hehexin@tongji.edu.cn

HANG YU
Tongji University
hangy@tongji.edu.cn

ZIXUN WANG
Tongji University
wzzxun@tongji.edu.cn

QI WANG
Tongji University
qiwangdesign@tongji.edu.cn

JAN DORING
Tongji University
jdorning@gmail.com

Abstract

Mixed reality (MR) devices blur the boundaries between the virtual world and reality, reshaping the way people work with assistive information. However, there are still strong limitations such as a limited field of view (FOV) and challenges for information searching tasks in MR glasses. Added capabilities of HoloLens 2, a recently released MR device, bring new possibilities to design interactive approaches. Approaches are proposed in this study, including body/hand-locked components, view-locked navigation components, and view-sensitive information layout. Prototypes were developed with and without these interactive approaches, and user studies were conducted to measure the task performance, usability, and presence. Results show that interactive approaches have positive effects on usability and presence, but no significant improvement in terms of task completion time. Different cognitive and behavioral styles lead to distinct preferences for different interactive approaches.

Keywords: Mixed reality, Information searching, Usability, HoloLens, Field of view.

Introduction

Mixed reality (MR) is an emerging field that merges virtual assets with the physical world. MR reshapes the way information is presented as it allows direct information interaction in the real-world environment (Tategern et al., 2016). MR glasses, such as Microsoft HoloLens, have shown great value in situations where the use of both hands at times is required (Dey et al., 2018). Previous systems (Hendersen & Feiner, 2011; Lorentz et al., 2016; Perla et al., 2018) have already shown the potentials of MR application in industrial scenarios, e.g. maintenance, inspection, and repair operations.

However, limited field of view (FOV) of MR glasses brings many barriers to visual tasks (Krujff et al., 2010). As typical MR glasses only support a FOV of 20 to 60 degrees (Cakmak-Çi & Rolland, 2006, p.), e.g. 52 degrees in HoloLens 2, 34 degrees in HoloLens 1, compared to the full FOV of a normal human with about 180 degrees, it creates an unnatural situation where even though there is virtual content distributed within the users view of the real world, only some of it is visible inside the devices FOV. A series of experiments (Krujff et al., 2019) indicate that search performance will be severely limited by the narrow FOV, though alleviated by proper arrangement of labels or indicators within the view. Another challenge in industrial MR scenarios is information clutter. Due to the increasing number of IoT devices and various tasks, maintenance workers need to deal with a lot of data to make decisions. Information clutter makes it difficult to access target information (Rosenholtz et al., 2005), and decreases noticeability of new items (Rosenholtz et al., 2007).

Prior MR studies suggest different approaches. Arrows visualizing off-screen information in the scene to counter narrow FOV show improvement in both task completion time and accuracy (Schinke et al., 2010). A recent work on HoloLens 1 demonstrates the spatial UI redesign of a MR museum system, considering four categories of factors including task, user, environment and system. To solve visual clutter, different information filtering systems (Julier & Bailloit, 2002) and view-sensitive information layout (Tategern et al., 2016) are introduced. In walking related MR scenarios, design and usage patterns of adaptive interfaces have been developed (Lages & Bowman, 2016). Those prior works provide insights on dealing with information clutter in MR, but due to the limitations of the device, interactive approaches are still under explored.

In this paper, we explore how interactive information presentation approaches in MR glasses (HoloLens 2) will influence the task performance, usability and user experience with narrow FOV, especially in close range. We explore approaches to overcome FOV limitations and information clutter by utilizing the emerging capabilities, namely Hand tracking and Eye Tracking. Prototypes were built for user evaluation to demonstrate how these approaches could enhance the performance, usability and user experience in MR IoT assisted tasks, utilizing an industrial scenario.

Method

Our approach aims to utilize the latest capabilities of HoloLens 2 to deal with the FOV restrictions in close ranges. In order to adopt our approach, workable prototypes were developed for industrial maintenance tasks. In the industry 4.0 era, IoT data becomes ubiquitous in industrial scenarios, providing real-time and on-site information to relevant personnel. As shown in Figure 1.a, in common cases, world-locked information annotations are placed statically near the corresponding machine parts. However, as users need to work on the machine, they can only see limited information near the machine as the devices FOV is too large. Thus, we designed an interactive approach, aiming at optimizing the information annotation arrangements and interactions to better fit the user’s actions.

Procedure

Participants. Ten subjects (7 males and 3 females) were recruited in this study, ranging in age from 23 to 30 (Mean: 25.1, SD: 2.64). All the participants experienced VR devices, like HTC Vive and Oculus Rift before and are at least somewhat familiar with HoloLens. All of them experienced HoloLens 2 before, and none of them experienced HoloLens 1.

Training sessions. When participants arrived at the testing area, they first informed about the purpose and challenges of the testing, and a brief questionnaire collecting their personal information as well as their previous experience with AR/VR devices. Then they entered a training session to get familiar with the HoloLens 2 device and the task. Participants put on the HoloLens 2 device, conduct an eye vision calibration and adjusted to get comfortable physically with the help of the experimenter. Following the Tips APP in HoloLens 2, participants were allowed to learn basic operations of HoloLens 2 (e.g. adjusting focus, moving device) by practicing the testing scenario and introduced to the tasks. To monitor and measure the task performance, we use HoloLens 2. Human-aware capabilities, including eye tracking and full hand tracking, were utilized to achieve interactive approaches, presenting as follows:

Setting the position and orientation of hand-locked component according to the palm up gesture and hand position.

Implement immediate interaction with view-locked navigation component.

Computing the user’s current focused information annotation target according to eye-tracking data.

To avoid learning effect, we will use Heat maps from the HoloLens 2 to measure the visual behaviors of participants.

User Evaluation

Scenario and environment

In order to evaluate our approach, we simulated an industrial scenario in a large office. The virtual assets include a hologram of CNC machine, which is duplicated from a real CNC machine in our engineering training center, as well as IoT data on an information annotation panel. Normal IoT data consists of real-time data and historical data, which were annotated near the corresponding machine part. Alert information was shown with on one part, describing the reason and solutions of the fault in text. Participants were required to identify the alert information, locate the abnormal part and check the condition of the historical data.

Two design cases were constructed in this scenario. One is the flat design case, in which all the information annotations are displayed statically in the scene with no interactions. The other is the interactive design case, which integrates all the aforementioned three approaches.

Interactive approaches

The main functions achieved in this interactive prototype are as follows:

View-locked navigation components. Users can get an overview of the entire information collection in a view-locked brief manner. Navigation components can be triggered manually, and a spatial guiding line will guide the user to the corresponding annotation. Information searching and locating are expected to be more efficient in MR with this function (See Figure 1.b).

View-sensitive information layout. Information annotations can adjust their level of details on response to the gaze behavior of users. With this function, users are expected to focus on items of interest and get more detailed information, and the information clutter in limited FOV may be mitigated (See Figure 1.c).

Body/hand-locked components. Unlike the view-locked components, body-locked components refer to those binding to part of user’s body, such as user’s hands in this case. When the user taps on the “Fetch” button of a specific component, it will be duplicated and bond to the user’s hands. This function is supposed to achieve a more natural way to provide assistive information (See Figure 1.d).

Implementation

Unity 2019 and Mixed Reality Toolkit (an SDK for building mixed reality experience) were used to develop prototypes in HoloLens 2. Human-aware capabilities, including eye tracking and full hand tracking, were utilized to achieve interactive approaches, presenting as follows:
Presence. Questions in Presence Questionnaire were adjusted to better fit our prototypes in mixed reality. As shown in Figure 6, there was a significant difference between the two design cases in terms of presence score (p=0.08). Participants experienced better presence in the interactive design case (mean=33.6, SD=4.33) than in the flat design case (mean=28.6, SD=10.58). Post-test interviews reflected positive feedbacks from participants, indicating that they felt more engaged in the scenarios and tasks.

Conclusion and future work
In this paper, we proposed interactive approaches for information searching tasks dealing with the limited FOV and information clutter in mixed reality glasses. By developing prototypes in HoloLens 2 and evaluating with users, we compared the design cases with and without interactive approaches. Our evaluation shows that interactive approaches provide better guidance and assistance to information searching tasks in HoloLens 2, but the enhancement effects vary within users. We will further look into different cognitive and behavioral styles of humans, especially professional users, and study how different interactive approaches can support different types of users. As we excavate more capabilities of the new MR device, our prototype will also be refined to integrate more functions, e.g. multi-modal approaches, human-aware techniques. Finally, we will develop practical applications to augment users in factories as well as other contexts.

Acknowledgements
Express here your appreciation for the contributions made by your colleagues, partners, volunteers, etc.

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Usage. Usability of design cases was measured by SUS total scores. Figure 5 shows a tendency that the interactive design case (mean=28.6, SD=10.58) was more usable than the flat design case (mean=26.3, SD=10.58). This is also consistent with our observation. One interesting thing is that nearly all the participants used the hand-locked interface, but only 5 of 10 participants used the view-locked navigation components. Participants reported different preferences toward different functions, which may relate to their cognitive or behavioral styles. Most participants agreed that interactive approaches help them to search for information in MR with better guidance or assistance, especially when they feel overloaded.

Conclusion
Based on the pairsample T-test, the completion time had no significant difference between those two design cases (p>0.199). Through the video playback and interviews after the test, we found that the reason may be that the amount of information in the scenario was not complex enough, participants could still locate the data by simply glancing around. We further analyzed the visual search behaviors qualitatively by comparing eye tracking heatmap patterns of different design cases. Area of interest (AOI) intuitively shows user’s visual focus in information searching tasks. Figure 4 shows that participants’ AOIs distributed in a wide range of visual searching areas. Participants were more focusing on certain areas in the interactive design case, reflecting the guiding effect of our interactive approaches.

Results and discussion
Task Performance. Nine performances with valid data sets were collected in this test. As shown in Figure 3, there was a tendency that the completion time of the interactive design case was longer than the flat design case. Based on the course sample T-test, the completion time had no significant difference between those two design cases (p>0.199). Through the video playback and interviews after the test, we found that the reason may be that the amount of information in the scenario was not complex enough, participants could still locate the data by simply glancing around. We further analyzed the visual search behaviors qualitatively by comparing eye tracking heatmap patterns of different design cases. Area of interest (AOI) intuitively shows user’s visual focus in information searching tasks. Figure 4 shows that participants’ AOIs distributed in a wide range of visual searching areas. Participants were more focusing on certain areas in the interactive design case, reflecting the guiding effect of our interactive approaches.

Task execution. At this stage, participants were instructed to execute the tasks in our designed scenarios following certain steps. Each participant took two rounds of tasks, one with the flat approach and the other with the interactive approach. The sequence of two rounds was randomized. At the beginning of each round, the experimenter started and adjusted the scenario to ensure it works well. Then the device was handed over to the participant and put on properly. The participant was asked to identify the textual alert messages from the CNC system and then try to locate the abnormal machine part. Fault reasons usually listed in historical data, so participants were required to find the specific historical data panel. Once they found the right information panel, they can go back to the CNC system and tap on the “Finish” button to confirm that they have finished the information searching task. While the participant was performing the tasks, experimenters can monitor the participant’s view through PC and provide aid for non-task related problems if necessary (see Figure 2). Between the two rounds of tests there was a 5-minutes break. After each round of test, the participant was asked to conduct a standard System Usability Scale (SUS) (Brooke, n.d.) to measure the usability, and a modified Presence Questionnaire (PO) (Usch et al., 2000) to measure the presence in MR of each design case. And a brief interview was conducted to know the feelings or opinions of the participant.

Figure 3. Whisker Box Plots of Task Completion Time

Figure 4. Comparison of Eye Tracking Heatmap Examples (Left: Flat Design Case. Right: Interactive Design Case)

Figure 5. Whisker Box Plots of SUS Total Score

Figure 6. Model quality comparison in mixed reality applications. By developing prototypes in HoloLens 2 and evaluating with users, we compared the design cases with and without interactive approaches. Our evaluation shows that interactive approaches provide better guidance and assistance to information searching tasks in HoloLens 2, but the enhancement effects vary within users. We will further look into different cognitive and behavioral styles of humans, especially professional users, and study how different interactive approaches can support different types of users. As we excavate more capabilities of the new MR device, our prototype will also be refined to integrate more functions, e.g. multi-modal approaches, human-aware techniques. Finally, we will develop practical applications to augment users in factories as well as other contexts.

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Redesigning a Workshop from Physical to Digital: Principles for Designing Distributed Co-design Approaches

Abstract
This paper presents a case study of a redesign of a physical workshop into a virtual one to illustrate the application of a set of principles for designing and running co-design online events. These workshops require a different co-design approach to overcome the challenges of working in spatially distributed settings, such as the lack of audiovisual cues, digital skills and physical presence. This approach involves developing a new design ‘language’ that a community can understand and use in engagement projects. In this paper, we present a set of principles for planning and facilitating online events, and designing interactions and facilitation tools to support the co-design approach of a conference workshop. The findings from this case study suggest that short-term activities and active facilitation can assist a technical producer can support the delivery of effective online workshops, enabling participants to achieve desired outcomes in a timely manner.

Key words: Distributed co-design, online workshops, virtual events, creative engagement, design principles.

Introduction
In co-design, anyone interested in doing more creative conversations can design new interoperable and engaging frameworks to support digital engagement processes, including communities in decision-making processes, where professional designers may or may not be involved in the engagement project (Zampolli & Alexiou, 2018). In this open design perspective, people use methods, techniques, and tools to engage with those involved in co-design projects to produce new knowledge around a matter of concern. In face-to-face interactions, people communicate through a conscious or unconscious paralanguage, which includes facial expressions, body language, pitch, volume, and speech intonation (Clubb, 2007). In physical workshops, these interactions happen in a specific time and space and can be assisted by tools that enable creative exchange between participants that goes beyond paralanguage. However, due to the covid-19 outbreak, there is a new shift from in-person workshops toward online approaches that uses platforms and tools to support community engagement in the era of physical distancing. Designing these types of Human-to-Computer-to-Human Interactions requires a different co-design approach, where people work in a process that can be spatially and temporally distributed over the Internet. This does not mean a translation or replication of physical workshops (Näkki & Antikainen, 2008), but rather an understanding of a new design ‘language’ that participants can understand and use for exchanging knowledge and ideas on a virtual environment. In online workshops, participants with different digital literacy and expertise in order to achieve an agreed objective.

How can physical workshops be conducted in online settings? This paper describes a case study, where we used the set of principles to redesign and deliver a conference workshop titled ‘Designing Research Ecosystems’ aimed at enhancing the understanding of research ecosystems, where participants agreed on criteria to design research ecosystems and ran pilot studies to develop principles to work in virtual environments. These principles draw on design theories and practices, including creative facilitation (Tassoul, 2009), open design (Crucikshank, 2014), participatory design (Simonsen & Bødker, 2013), and design co-creation (Zampolli & Alexiou, 2018), and interaction design principles, such as employing short-term activities to reduce information overload, keeping things simple, and good design practice. In the following sections, we present a set of principles for distributed co-design, where we adapt our improvement framework used for redesigning engagement tools (Crucikshank, 2018) to cluster the principles in three co-design layers of practice: Planning and Facilitating online events, and Designing interactive resources.

Planning Online Events
Planning engaging events involves considering the audience, platform, aims and objectives, and actions used for engaging with a community of experts, potential users or beneficiaries. The first step is to design an open design space to frame contextual challenges into a co-design process, enabling participants to exchange ideas and expertise in order to achieve an agreed objective.

Define the appropriate co-design approach. The first stage involves thinking about the people attending an online event (the number of participants), their technical limitations (e.g. access to internet, levels of digital literacy, familiarity on the screens), platform used, and setting requirements beforehand (e.g. smart phone or computer). The analysis of these factors will determine the platforms to be used and the level of adaptation of the technologies. For instance, if participants have issues to access Internet, the co-design approach could involve the use of phone call and text or voice messages. In this way the event could go low-tech without broad-band issues. Another option is to work in different times so using a combination of interactions in asynchronous events. A digital platform should address the broad and specific needs of participants to respond to the audience needs. This approach is known as a participatory design strategy that features Wittgenstein theory (1922), where a specific design language game resembles professional’s practice is applied in design-by-doing processes.

Plan short-term activities to reduce information overload. The second step is to select participants in a set of principles for performing online workshops are not the same as in physical workshops. When participants attend physical workshops, they can focus on the task at hand and more directly engage with the facilitator in a relatively simple environment. When working online, however, participants are more distracted and need to overcome distractions in their environment. This change in process requires not only reducing the workshop duration, but also the time spent in each interactive task.

DESIGNING INTERACTIVE RESOURCES
Designing interactive resources is similar to creating tools to assist participants and facilitators to run physical workshops, such as proformas, worksheets or templates. Tools support techniques and skills (e.g. discuss, type, react, drag and drop), enabling participants to share knowledge and ideas through telling, making sense of activities. Another suggestion is to assign participants into small groups to reduce the number of interactions on their screen. For example, facilitators could instruct participants to use video only for discussion and ask the group to agree on who will do what when generating inputs to avoid confusion.

Think about what interactions are needed to enable creative exchange. The type of interactions affects the flow of the event. Introducing many new techniques in online events can overwhelm participants, requiring extra time to allow them to familiarise with the platform and respond to tasks. Breaking down engaging interactions into small tasks in different windows/spaces can help participants in making sense of activities. Another suggestion is to assign participants into small groups to reduce the number of interactions on their screen. For example, facilitators could instruct participants to use video only for discussion and ask the group to agree on who will do what when generating inputs to avoid confusion.

Design simple activities with tools for remote teams (e.g. google docs, Miro). Limiting single selection actions, such as listing, sorting, matching, and ranking, can reduce the number of interactions on their screen. For example, facilitators could instruct participants to use video only for discussion and ask the group to agree on who will do what when generating inputs to avoid confusion.

FACILITATING ONLINE EVENTS
Facilitating engagement events involves implementing the principles for designing distributed co-design approaches. This principle means to make sure everyone can contribute to a co-design event, enabling participants to share their experiences and ideas in a creative way. This process requires not only reducing the workshop duration, but also the time spent in each interactive task.

Get beyond the screen. Designing activities that make people move around can introduce physical activities and provide fun. Icebreakers are often used to start a session and get people talking, providing a more human connection in an online event. For example, facilitators could ask participants to share a photo of a scenic landscape while explaining what makes that place special. Another example is to include a video of a virtual environment, encouraging participants to share their experiences and ideas in creative ways.
Case study: Designing Research Ecosystems at the DRS2020

Researchers, just like business enterprises (Adner & Feiler, 2019; Iansiti, 2004), are faced with challenges of understanding interrelationships with their diverse ecosystem actors. Consequently, identifying key factors and actors shaping ecosystems is paramount, this is butressed in (Pankov et al., 2019), who identify how contextual factors may influence interconnectors in a exchange of resources between ecosystem stakeholders. Since researchers are all increasingly becoming part of a complex interconnected research milieu, having a deep sense of roles and positions within this complex may aid better understanding of research ecosystem opportunities. Designing ‘researcher’ ecosystems workshop aimed to enhance the understanding of ecosystem configurations, in order to influence the shape of their ecosystems which often evolve organically (Nthu bu et al., 2019). This was achieved using a co-design framework developed and tested for mapping innovation ecosystems.

We adopted the ecosystem design framework (Figure 1), developed through engaging with manufacturing SMEs in both the UK and Botswana. We further reviewed the framework with a group of design researchers with vast experience in co-designing tools at a pilot workshop to ensure the design framework was appropriate for a meaningful application with non-expert designers. Based on the feedback received, the tool was redesigned before use in workshops with 100 participants from a wide range of African organisations e.g. manufacturing SMEs, policymakers, NGOs, researchers and university administrators held in Botswana in February 2020. The visualisation outputs from these workshops formed scaffolds for dialogic design, reflection and decision making, thus according participants a platform to reframe and shape future forms of innovation ecosystems.

We designed the DRS2020 workshop around the co-design mapping framework to enable participants to initiate, design, review, activate and sustain innovation ecosystems. Initially, we planned the workshop to happen in a physical workshop environment, but it had to be delivered in an online environment due to the new conference requirements. This case study documents the workshop plans (physical and virtual), the redesign process, and the outcomes, which are described in the following sections.

The physical workshop plan and materials

The initial plan was to conduct the workshop in two parts for 105 minutes, starting with each participant mapping their ecosystems and then later working in groups to combine individual visualisation outputs. We planned to use A3 and A5 paper-based tools for mapping and representing participants in network structures. The workshop materials and plan are described as follows.

Part 1: Individual work

Address ethical issues: Explain the workshop aim and consent form

Icebreaker: Using a design tool (Figure 2: left), participants draw themselves in network and explain it in 5 seconds to the rest of the group.

Discussing innovation ecosystem value: Presentation and discussions lead by the facilitator

Identifying criteria for ecosystems: Participants list many criteria for ecosystems and select 5 most important to use on the tool.

Visualising roles and ties and meaning: Plot roles and ties on the tool according to the strength of connections. Connect all the points with a line to reveal insights

Dialogue with other actors: Share insights about the visualisations through presentations

Part 2: Group work

Identifying criteria for ecosystems: Participants list many criteria for ecosystems and select 5 most important to use on the tool (Figure 2: right).

Visualising network roles, ties and meaning: Using different colours to represent each participant, plot ties on the tool according to the strength of connections.

Dialogue with other groups: Share insights about the visualisations through presentations

Evaluate the tools: Participants to complete an evaluation form about the tools used, and share suggestions for modifications

The diagram in Figure 1 is a modified visualisation from the ecosystem design tool (IDCoD) for mapping the relationships and decision making in a workshop setting. The following section presents how we applied the proposed principles in the redesign of the physical workshops into an online version.

Planning the online session

The change in the amount of time allocated to a virtual session was reduced to 60 minutes from the initial 105 minutes, thus affecting the workshop design from the initial two sessions to one. Although the change in time duration was a conference requirement, it was also a way to reduce information overload as the workshop was part of a full-day virtual conference.

We chose to use the MIRO whiteboard to support our online workshop as a popular tool currently used by profession- al designers and researchers. As other workshops held during the conference also used the platform to exchange knowledge with other participants, it seemed to be an appropriate choice to support our workshop.

Regarding the icebreaker, which normally introduces the concept of ecosystems, we changed it to a virtual activity, where participants were expected to pick any object or ‘thing’ laying in their physical spaces and talk about that in 10 seconds, and nominate another participant to do the same with the aim to find connections between these things.

Facilitating the online session

Another disruptive change to the physical workshop was the introduction of a pre-recorded video presentation, where we had to show it at the start of the workshop session as a virtual conference requirement. This requirement added another layer of challenges in redesigning the virtual workshop because it required the mastery of new digital recording skills in a short period. The support of a technical producer, who knew how the mediating technologies operate, made it easier to blend the facilitation skills and technical layer into the co-design process.

Explaining the use of MIRO and Microsoft teams during pre-recording meant that we had to explicitly elaborate the technical language of a virtual environment in a 10 minutes video presentation. This included how participants are expected to navigate between the main session and breakout rooms, explaining the layout of MIRO as a platform i.e. where to find frames to navigate through the design process, where to click and type or copy and paste information, toolbar to use.

**Figure 1. Co-design ecosystem mapping tool**

**Figure 2. Paper-based tools for representing participants in innovation networks (Left) and mapping group networks (Right)**

Assign co-facilitator roles to team members (Wing person and technical producer).

In physical workshops, a wing person is the one who gives support to the main facilitator, making sure participants understand the task and do it right. They might also be taking pictures, handing over pro formas, and observe the session as an outsider. In online workshops, a technical producer or director is the one who creates interactive mechanisms to support virtual sessions, making sure all the digital infrastructure and materials are ready to deploy and assist the main facilitator. They can plan events to work over a day or a week to support participants in co-designing desired outputs that might not require an active facilitation. For instance, a wing person could keep the flow and engagement of participants between transitions such as between icebreakers and tasks, whilst a technical producer prepares the stage for facilitation. A backup messenger group can support the communication between the main facilitator and co-facilitators.

Role-play the planned ideas

This process is similar to designing a creative facilitation approach for an in-person workshop, where an iterative process of planning, prototyping and testing a session would support the improvement of the overall workshop (Crucikshank, 2014). Running through the session helps to identify the technical nuances and issues that might happen during the event. When testing an online event, inviting participants with the appropriate level of digital literacy can help identifying things that could go wrong. For example, ask your colleagues to do the workshop tasks and role-play the planned ideas.
DESIGNING INTERACTIVE RESOURCES

Unlike in-person workshops where the planning of design activities involves procuring well-established tools e.g. sticky notes, whiteboards, printed mapping tools, in virtual workshops planning, a lot of time is spent on honing virtual design spaces to lessen the difficulty in using virtual whiteboards and make participants with low digital literacy less worried about learning new skills during interactions.

We broke down the interactions into different spaces to help participants in making sense of activities. The workshop was limited to four design spaces, with customised icons and tools to ease the co-design activities and lessen the need for high digital literacy (Figure 3). We designed a table with fifteen spaces for participants to fill in their own criteria which include five boxes for participants to agree on five main criteria and fill in the boxes. Participants actions were to click and type in their key contacts in the spaces provided. Activity-3 was the main mapping tool space, we provided participants with node icons to copy and paste on the co-design tool, connection line tools to connect nodes, and a text tool on the left to type in their labels. They also had an option to use sticky notes to add reviews. In Activity-4, we use a combination of questions, node icons, boxes and emojis, since people are much familiar with emojis from the realm of the social media, we thought it would be more interesting to use them. Participants were all doing the design together in a single MIRO whiteboard instead of the initially planned three whiteboards. This reduced the complexity of navigating between breakout rooms and whiteboards, thus making the facilitation much easier. Operating in one session enabled us to address all design questions promptly by doing e.g. copying and pasting contacts on the tool. Deciding and mapping criteria, contacts, and the strength of ties were a challenge for some participants, we resolved this by demonstrating the process on the same design space, thus providing design hints to guide participants. They creatively engaged with the mapping tool through MIRO without issues (Figure 4).

Although the virtual workshop was the first of its kind, participants developed mental images to represent how their research ecosystem networks are configured, and these combined networks scaffolded a dialogue on future trends of research ecosystem configurations, to maximise the research output. This contributes to the question of how future ecosystems might be designed, taking an active role to visualise and engage potential collaborators in designing future reconfiguration of ecosystem networks. Finally, participants thought the tool was handy in aiding engagement with new actors, providing them new understandings in designing innovation ecosystems. This project also revealed interesting insights into designing and running online workshops.

Workshop outcomes

During our virtual expedition, we had a low attendance of participants than expected, this was observed across other conferences workshops. One of the reasons why participants who signed up for the workshop did not attend was related to technical issues of finding workshop links and challenges associated with different time zones. The low attendance meant that participants were all doing the design together in a single MIRO whiteboard instead of the initially planned three whiteboards. This reduced the complexity of navigating between breakout rooms and whiteboards, thus making the facilitation much easier. Operating in one session enabled us to address all design questions promptly by doing e.g. copying and pasting contacts on the tool. Deciding and mapping criteria, contacts, and the strength of ties were a challenge for some participants, we resolved this by demonstrating the process on the same design space, thus providing design hints to guide participants. They creatively engaged with the mapping tool through MIRO without issues (Figure 4).

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Abstract
Architecture has been associated with permanence for a long time. Construction methods and materials are designed to create an architectural object that is durable, while the limited option of housing typologies remain the same. The exercise of inhabiting is dynamic and complex, and it becomes more evident nowadays. In the era of globalization, changes reflect a society where mobility and flexibility are highly relevant factors. With high demand for housing, an undeniable need for redefinition and a high index of wasted properties, it is necessary to rethink the way we live. What could the housing of the future be like in urbanized areas? This project is an invitation to reinterpret the most intimate nucleus of the human being, to understand housing as determining pieces in the shaping of the urban environment, where the type of house that is designed is directly related to the type of city that is built.

Keywords: urban density; housing; circular economy; prefabricated architecture; sustainability; flexible spaces; contemporary nomadism; temporality; co-living.

Introduction
Global population in urban areas is predicted to increase from 3.9 billion today to nearly 7 billion by 2050 (United Nations, 2014). Yet with developable area becoming scarcer and the cost of housing rising in almost every major city, billions of people could struggle to find an affordable and comfortable place to inhabit. The problem is approached as a great challenge, where much of the housing debate narrowly focuses on finding ways to increase the number of homes built and make them more efficient. However, forms and sustainable lifestyles must be rethought. From this perspective, a widening gap is recognized between the cost of housing and income levels, meaning that young adults find it increasingly difficult to access the housing ladder, as seen in Figure 1. Thus, it is not only the lack of affordable housing that should inspire us to rethink how to live, but also the changes in lifestyles in our current society. In the condition of change and development is manifested within the framework of five macro trends: first, the acceleration of urbanization; second, demographic change; third, political and economic changes; fourth, technological advances; and fifth, the scarcity of natural resources, all of which will pose enormous challenges to the daily life of man today and in the future.

Background
Sustainable urbanization is key to successful development of future cities. Both economically and ecologically, it will be impossible to meet the housing demand with today’s architectural and urbanistic forms and methods. However, how could
day-to-day living,
Future housing be designed and developed in urban areas and in a world that is so rapidly changing in every aspect? To consider new approaches and understand how architecture can, in fact, be in tune with all the life cycles and tasks that enable human beings to live, change, and evolve have been perceived over time.

For instance, there is no doubt that time is a substantial part of human life. Time, like space, is an important component of our living experience. But even though it governs everything around us, defining it is a complex task.

Furthermore, as a linear series of measurable points of the now (Alweiss. 2002:119). It is interpreted as a modification of the present. Past is what no longer presents, and future is what presents. Catan- chin’s times, “time sets the tone; it brings changes and measures what is done that is done.” (2017:19)

In this way, the temporal limits of human existence are expanded through architecture and thus architectural constructions are a defense against the anxiety of nonexistence. As a result, “time sets the tone; it brings changes and measures what is done that is done.” (2017:19)

Architecture establishes the environment. It provides stability and a sense of existential continuity. Alvar Aalto, an important Finnish architect, states that “architecture has to come to the life of the human being, it must be their desire for eternal life on earth” (Pallasmaa. 1998). More than any other form of art, architecture is an instrument for slowing down and experiencing time. It is an instrument of art and participation in cycles of time that exceed the scope of an individual life.

Time accompanies architecture in all times through cycles and transitions. But buildings, just like human beings, age.

In addition, Pallasmaa writes, “Time is the most fundamental as an art of permanence.” (Pallasmaa. 1998). Throughout history, Housing has been encouraged to be in tune with the imitable and durable characteristics of buildings. The intrinsic nature of most architectural expressions is durability (Bet- sky. 2016), but it should be noted that people that live in lifestyles, social rituals, economic conditions, and the needs of society, architecture remains prett- y much immobile (Maak. 2015:16). Actual housing typologies and the market around them do not favor the big trends occurring today regarding mobility and globalization. A change of job or school, social configurations, or life plans are all happening inside the same architectural units. These do not respond to the mutable needs. People’s lifestyle is imposed by an archi- tectural form, instead of the other way around.

Moreover, housing needs are not static. The configuration of the interpersonal relationships of those who live in a community also undergo continuous changes: in a family, children grow up and become independent; couples join or separate. A home should be thought of as a flexible setting that can adapt to different atmospheres or situations (Maak. 2015:216). A home, or a structure, should be capable of changing the meaning of inhabiting. They used the land sensitive- ly as a resource, allowing it to renew itself wherever they had left it, and the tulani huts, are all clear examples that a home and the sense of place do not need to be in a fixed and immobile (geographic) space (Kronenburg. 2002:7).

As man developed the knowledge to pursue agriculture and subsequently establish permanent settlements, ephemeral ar- chitecture became the forerunner of permanent structures.

However, as Elienne Bou mentions in his thesis “Contem- porary Nomadism”, “In this rapidly changing world, you can no longer be connected to a fixed location. Humans today are returning to their nomadic origins” (Bou. 2016).

Today’s generations, especially younger ones, are start- ing to develop a different perspective of our lives, who will represent most of the housing market’s demand in the upcoming years. The fixed reality of past generations, such as the idea of living in a house and a steady lifestyle, have to day disappeared.

Many, clearly different problematic factors are coming to- gether today and are pressing for new approaches. Population, housing demand, globalization, different lifestyles and changes are on the rise. While on the other hand, develop- able areas and natural resources are diminishing.

The way man lives in today’s world has changed. Technolog- ical advances and globalization have transformed our culture into a fast-paced society, revolving around obsolescence and temporary products (Kronenburg. 2012). The value placed on a structure, while not in use, is not unlike the value that Structure, which is a temporal process, attributed to the structure, temporary, to be a principle of transformation and evolution of the landscape.

The strategy of the New holistic dwelling typology model (Figure 4). A base structure, like the analogy of a tree, with its context, Hybrid Housing must do so with the context in which it is placed. From a process-based, structural concept of the modular system for the project under development. The model would be prefabricated, and quickly assembled on site. A decommissioning strategy consisting of structural beams, that in the sky will be anchored to the host building’s rooftop, aligning with its existing construction grid to distribute the load of the new model, (Figure 3, p.55 in Gluber, 2011)

The same way that the animal’s habitat is articulated with its context, Hybrid Housing must do so with the context in which it is placed. From a process-based, structural concept of the modular system for the project under development. The model would be prefabricated, and quickly assembled on site. A decommissioning strategy consisting of structural beams, that in the sky will be anchored to the host building’s rooftop, aligning with its existing construction grid to distribute the load of the new model, (Figure 3, p.55 in Gluber, 2011)

As mentioned in the nature analogy, just like an eagle choos- es the location of the tree that best suits its needs, it then constructs its nest, the eagle’s home becomes finite and generates no waste. The housing unit while using the land in an efficient way. If it no longer needs it, the nest’s materials return to the earth, thus the eagle’s home becomes finite and generates no waste.

Figure 3. Temporary dwelling on rooftops reuses obsolete buildings and creates vi- brant communities.

Temporary use of urban voids can be an opportunity, both for nomadic residents and for owners with a disused urban set- as, positively transforming the urban image and the available resources, on a path to a circular and changing real estate market.

By inserting new living spaces in a specific area, the density will grow and transform the urban neighborhood into a place with commerce or any other place that involves day to day activities, as well as the coexistence of inhabitants within dif- ferent income groups, will create a city in which sustainability and quality and wellness contribute to economic, cultural and commu- nity enrichment.

Mobility and a lack of accessible housing for young popula- tions in many cities are reasons to support housing densifica- tion strategies and solutions. This is why Hybrid Housing seeks to offer a housing model focused on Millennial and 2 Genera- tions, a population group that pressingly needs it.

Construction system

An analogy of desired characteristics for the project was found in the eagle, its way of living and its nest. Studying this to leave the nest was the starting point to an interpretation into architecture.

It makes sense to study nature and the way in which an- imals and other Homo Sapiens inhabit, as they are nature’s models that have emerged through the process of evolution, subjected to a variety of conditions. Juri Lebedew said that “in nature, the principle of the integration of function + form + structure is effective, and it adapts to its existence and inter- relation with the environment”. (Lebedew. J.S. Architektur und Bauen. 2011:1)

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Figure 4. System analogy

Materials

Hybrid Housing seeks to generate a coherent project, aligned with contemporary material flows, design tools, manufacturing technologies and assembly processes. An analysis of materials,
through a selection process, was made to determine those that best respond to the system and its parts (Figure 5). An W beam structure was chosen for the transition structure and square steel profiles for the base structure. The prefabricated components are made out of pine wood and OSB panels, with a wood stud interior structure, and have recycled textiles as insulation, a big waste of local industries. All the system is then covered with white perforated steel sheets, and plain steel sheets for the roofs.

Program. 40% (2 billion tons per year) of the global waste production is due to construction alone, and housing itself represents a big part of this problem (UN Environment Programme. 2020). Seeking for work solving this problem as well, all building components and materials of the project are designed to be disassembled and replaced, reused and recycled over the lifespan of the building. Hence, a circular approach is considered in the management and life cycle of the system.

The project is essentially a bank of materials (Figure 7). Once the system is dismantled, every material and each of its parts can be used for the construction of a new home, transformed into new materials or they can return to the ground. This approach will help homeowners generate a greater economic value, improve their health and reduce the negative impact on the environment by a minimized use of resources.

Not only would this benefit the planet by minimizing waste, but it would also align with normic trends and the rapidly changing social and lifestyles. The model gives people more freedom and flexibility. Until, who would be able to own a piece of the project and then engaging people to finalize parts of the design and construction themselves (Figure 6). This will reduce construction costs and offer the chance to creatively customize the design.

The digital platform, users will be able to design, customize and order their own housing kit. Based on size, costs or individual wishes, the platform will give the users a quick idea of how their new home would look like, and how it can be transformed and adapted through different stages.

They will receive the flat packed building components, and will need only some basic tools to assemble the pieces together into the modular structure. It is almost like a DIY project, enabling the initial initiated-structured architecture and supporting their new family members.

Urban regeneration

It is necessary to think about the project in relation to its urban contribution. It is a key aspect to understand houses as units that build a city, and not as isolated elements that have no relation and connection with its context. This is the scenario where the project unfolds, an urban context in the process of densification, where the challenges of building in an already urbanized city is clear; and where the type of housing that is designed is directly related to the type of city that is built.

The new dwelling models become essential pieces in the re-generation of the urban environment, they attend to the basic need to reinvent living spaces. The importance of the project does not only lie in the change of traditional construction models, but in the way each house defines living spaces in accordance with contemporary cities that require new actions and ideas from architecture.

Conclusion

It is undeniable that people want to live in a more pedestrian, sustainable, and contextual and equitable city, and this research project is a small step into achieving it. It seeks to create a city in which, in a respectful and ecological way, each user has the opportunity to choose where and how they want to live.

We aim to understand housing as a temporary, reconfigurable and adaptable space, and visualize these new housing units as tools that transform and respond to the different phases, stages and needs of any individual or family.

Aware of the negative environmental impact that architecture and construction have, it is clear that action needs to be taken to transform and improve current construction methods. Hybrid Housing is a project that emerges from a single thought: how can we create architecture that contributes to the planet?

We need to start questioning traditional systems, typologies, materials and processes and create architecture that has a positive impact on society, the city and the environment. Hybrid Housing is nothing more than a product of our honest concern for the future: our future, our generations, for the city and for the planet.

This research paper is about sparking ideas, driving a conversation, encouraging a critical eye on the issues that exist today and provoking thoughts on what can and should come next. We need to start asking ourselves questions such as: How do we want to live in the future? Are we satisfied with what today and provoking thoughts on what can and should come next. We need to start asking ourselves questions such as: How do we want to live in the future? Are we satisfied with what
No one can predict the future, but anyone can shape it. Today’s challenges are a great opportunity to re-imagine how we might live tomorrow.

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References


We’ll meet again! ‘Design: Vertical & Horizontal Growth’ was a precursor to the official annual Cumulus Conference. Postponed due to COVID-19, this will now take place in Moscow and St.Petersburg in June 2022. If you have any comments or questions, please do not hesitate to contact us by email cumulusrussia@gmail.com