

АРХИТЕКТУРА ЗДАНИЙ И СООРУЖЕНИЙ.
ТВОРЧЕСКИЕ КОНЦЕПЦИИ АРХИТЕКТУРНОЙ ДЕЯТЕЛЬНОСТИ/ ARCHITECTURE OF BUILDINGS AND STRUCTURES. CREATIVE CONCEPTS OF ARCHITECTURAL ACTIVITY

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**ЦИФРОВАЯ СЕТЬ КАК ВОЗМОЖНОСТЬ СОЗДАНИЯ КОЛЛЕКТИВНОГО АРХИТЕКТУРНОГО
ДИЗАЙНА: ИНСТРУМЕНТЫ И СТРАТЕГИИ**

Научная статья

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Аннотация

Цель представленного исследования - понять, как глобализация меняет структуру индустрии архитектурного дизайна и какие стратегии и технологии мы, как профессионалы, можем использовать в своей практике для удовлетворения текущих потребностей отрасли. В данной статье обсуждаются возможности цифровой сети и то, как она может расширить наши возможности совместного дизайна и проектирования. Исследование рассматривает историю архитектуры и анализирует текущие тенденции индустрии, а также предлагает ряд решений для более эффективной реализации проектов и коллективного создания дизайна.

Ключевые слова: архитектурный дизайн, коллективный дизайн, цифровые технологии.

**THE POWER OF NETWORKS AND THE DIGITAL WORLD OF CO-CREATION:
DESIGN TOOLS AND STRATEGIES**

Research article

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Abstract

The purpose of this study is to understand how globalization is changing the set up of the architectural design industry and what strategies and technologies we, as industry professionals, can incorporate in our practices to meet the current industry demands. This paper discusses the power of the network and how it can positively redefine our approaches and expand our capabilities in design co-creation. This study looks at the history of architectural design, and analyzes current industry trends and demands. It also offers a number of research-based solutions for more effective project delivery and design co-creation.

Keywords: architectural design, co-creation, digital technology, network.

Introduction

With the advent of the internet, the way we do things has changed dramatically. The online network allowed us to establish new connections and provided an extremely efficient communication channel. The world wide web changed the practices of many industries at their core, and it did not exclude architecture and design. Apart from letting us, architecture professionals, deliver work more effectively, it allowed us to establish a two-way communication with the end user.

Prior to the online network, the creation process was primarily linear - from the designer to the end user - and there were not enough tools to accumulate users' feedback, conduct deeper research etc. Currently many firms worldwide leverage the power of networks to deliver work, but unfortunately do not leverage it enough to create context sensitive design solutions. Oftentimes, companies get appointed to design plots of land and end up producing design solutions that contradict the context of the city, or, simply put, do not make sense to the people who live in the neighborhood.

It is possible to argue that such conflicting environments are created due to designers not taking the extra step to familiarise themselves with the context; failing to incorporate the tools to collect data about the needs of the particular area and its residents.

We are living in a day and age when it is easier than ever to collect data and leverage it in our design processes. When it comes to smaller scale projects, simple observations of people's daily narratives and interviews can suffice. However, when it comes to large urban developments or public spaces, it becomes more challenging to accumulate data and co-create with the users of a particular space.

In this paper I will look at existing practices, as well as some of the bright examples of how architecture and urban design can be co-created using the power of the network. I will also look at the problem at micro and macro scales: firstly starting from the typical design studio setup (the internal structure of the design team) and moving to macro, relating to teams of designers interacting and receiving feedback from the end-user of the space.

Network specifism

In his essay, “Network Specifism: Beyond Critical Regionalism”, Carlo Ratti (2013) and his co-authors say that the internet, geo-location, IP locations and URLs are everything in the digital age. According to them, they all affirm “the renewed centrality of place itself within the boundless gaping geographies of virtual and parallel worlds”.

The connective power of networks has the capability to increase connectivity between different people, and therefore provides a connection between the local and the global. This includes networks for building users and citizens, networks that link traditional disciplines and networks for design professionals who can work together from across the globe, using synchronized digital tools.

It seems that in this digital age network specifism starts to redefine design practices within the architecture industry; it takes it to a new level by integrating almost limitless global connection into architecture and a number of other disciplines, such as network analytics or theoretical ecology. Now, architectural production can be based not only on the site of the building, but also within the networked community of people that contribute to it.

One of the most well known platforms where such interaction is happening is Kickstarter. Throughout the global network, ideas and voices resonate and make different projects feasible. This principle has another similar platform, Brickstarter, but with the focus on the local scale: communities, neighborhoods and cities [2].

Recently the anthropologist of technology Christopher Kelty made a complex scientific analysis. It showed that networks of human interaction are locally grounded and he described it as “recursive public” - an open community that is both a generator of networks and its result [1, P. 3].

Now is a special moment in time - ideas, projects and urban fabric of cities can be produced on collective platforms of dynamic exchange and co-production. Why? Because unique and intimate collaborations across ever-present networks add quality and value to architecture. Now, technology and the power of networks can work as a tool to create “new places of intimacy and exchange - places without the restrictions of physical space” (FutureEverything Publications n.d.).

Why co-design is important

Oftentimes, architects and their teams make multiple site visits, which allow them to understand key components of the area: key functions and space uses, transport intersections etc. Design teams might even do their research during different times of the day to see how the space operates under different environmental conditions.

But when it comes to large urban environments, there is an infinite number of potential uses, users and particularly narratives that happen within the space. And the more information architects and designers can find/accumulate about the space, the more responsive and contextual their design solution will be. And that is the key to designing places that people love.

Understanding how people use spaces is about collecting multiple viewpoints in one big ecosystem/web and leveraging that in the design process. It is about gathering collective intelligence and feeding it back into design.

“Co-design illustrates how architectural intelligence can be exercised in a much broader spatial field that acknowledges more than just the building itself but social, global, ecological and virtual networks, thereby changing how the authors design, what the authors design and who designs it” [5].

Collecting users’ feedback and general information about the user experience narratives can help architects and designers identify existing and desired programmatic blueprints and design spaces accordingly. Such data can serve as a framework for design: by respecting established social narratives and the end user, an architect can tailor their designs to the programs that already exist and therefore increase the overall social capital of the area. (Fig. 1)

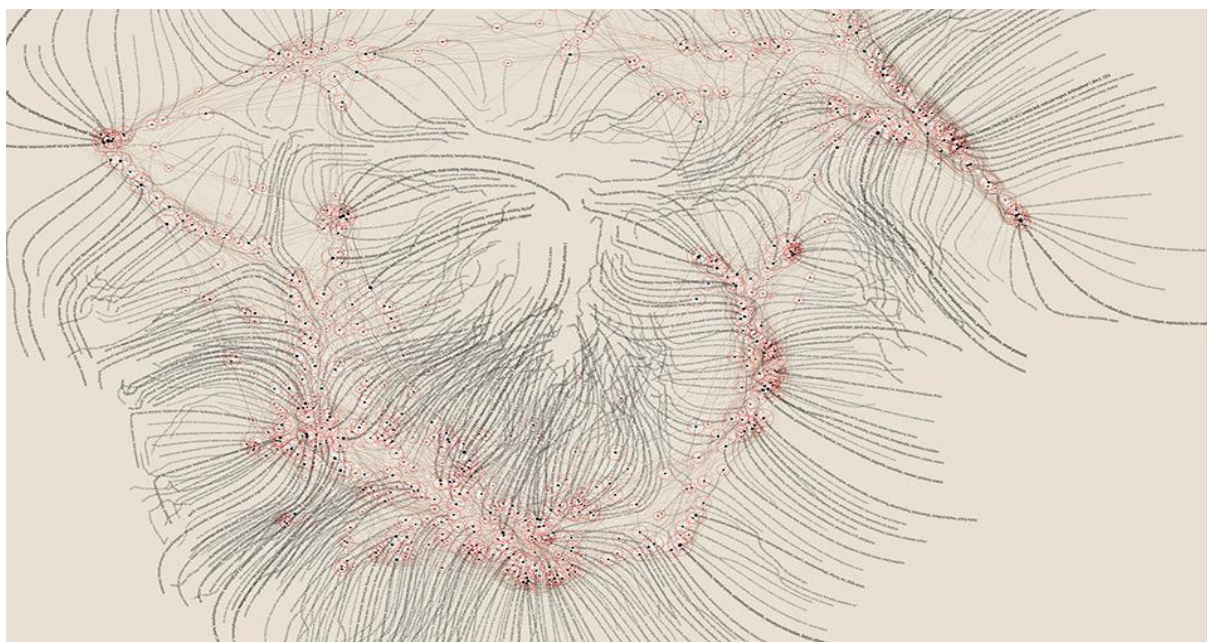


Fig. 1 – Collective representation of a topic map: organized paradigms by aggregations, connections and popularity

Co-creation strategies

Co-creation is an active and engaged collaboration between users and the experts (between the end user of the building / space and the experts in the design field). Co-design by definition is done collectively with the user in the equation and is deeply rooted in engagement, understanding, ideation and validation.

To successfully put such practices in place, it is crucial to first consider both groups (the design professionals and the end user) separately. While the end user can only cooperate with the design team and deliver his/her opinion, the design team has to work coherently within and have common values and objectives in place. This is why the first part of this chapter will focus exclusively on design team principles, and the second on orchestrating effective user-designer feedback loops.

Part 1: Design team principles for effective co-creation

1. Homogeneous skillset. To be able to effectively communicate with each other, it is important to speak the same language. When it comes to co-design, knowing the same software is crucial for establishing an effective workflow.
2. Clear definition of the project and clear structure of deliverables. Having a comprehensive understanding of the deliverable can help individuals to approach work more strategically and plan time more effectively.
3. Establishing individual roles and individual deadlines for specific tasks. Currently, design teams rarely measure the KPIs of their design team members. To ensure that the team is working efficiently, it is crucial to access the performance of each member.
4. Each team member should be familiar with the evaluation criteria and expectations of the team. Having such practices in place promotes self-reflection, communication and better performance in the workspace.
5. Smaller and more diverse design teams make for better understanding of the urban environment and the community, as well as making more effective decisions.
6. Horizontal structure of the team
7. Holistic and narrative based design approach. Program first, design second. Supporting existing spatial narratives with well-implemented design.
8. Mutual team values of respect towards the end user. Seeing/recognising significant value in the community's feedback.

Part 2: Orchestrating user-designer feedback loops: tools and methodologies

Facilitating positive interactions between the end user and the design expert is key to co-creating a successful project. Currently there are few architectural and urban design platforms that support data collection from the user, but there are several great methods and examples of user feedback loops that I will discuss below.

Perhaps some of the most popular tools nowadays that require individual participation are security applications like Citizen and Nextdoor. These applications allow users to map criminal activity and provide the community with a comprehensive, time-sensitive canvas of data. Such platforms are extremely popular as they leverage the power of the community. They collect crime events in one ecosystem and create collective awareness.

But how can we effectively crowdsource community observations for architectural and urban design? First of all, it is important to note that in this industry most volunteer research activities are conducted by teenagers and elderly people. Due to the age of the latter group, most of the research is still documented using pen and paper. But things are changing and technology is finding a way to integrate hand-written observations with digital data collection tools.

A great example of such a tool is the application LocalData, which allows people to collect data and integrate it into a time-stamped, visualized and mapped data ecosystem. It allows communities to either use their smartphones or print and scan their research to integrate it back into the system. LocalData leverages the power of the community network and manages to consolidate urban planning and urban research processes, which are typically very disintegrated. The application collects the data, but also maps and structures it, relieving urban planners who previously had to manually process and make sense of all individually-collected data.

With the development of such new tools, it is becoming easier to crowdsource community observations and reports that can be leveraged to make strategic neighborhood decisions and improvements, be it security, design or any other field. Personally, I think the next logical step towards developing and leveraging such collective intelligence would be to integrate this technology into our social networks. Social networks already provide us with the ability to create feedback loops in the form of questionnaires, opinion polls, crowdfunding and tagging our geolocation. The next step would be about adapting or tailoring the technology we already have towards the research in a specific field. Leveraging the power of social networks can give us access to different demographic groups, communities and neighborhoods, and deeply enrich our design practices.

Discussion and conclusions

Digital co-design and co-creation is about making people's lives better; it is about facilitating deeper community involvement and using data to inform urban design projects and city improvements. It is an approach that can help architecture industry professionals produce more responsive designs and more effective design solutions. User feedback is often highly valued in business - organizations ask their customers what can be done from their side to provide a better service. The same logic can be, and should be, implemented in design as well.

Urban design is about people and for people. Involving people in the co-design process is about leveraging community observations and using programmatic narratives as a foundation for effective urban planning and design. It is important to not only make environments aesthetically pleasing, but also make them usable and that is where we, as creatives, need users' feedback. Implementing feedback loops from our users (a community, when it comes to urban design) can improve our work as designers and help us deliver projects that people love.

In her workshop “Co Design”, Liz Sanders discusses an interesting timeline: she believes that in the past it was just design (where experts design for people) but now we are in the time of co-designing, where many companies and professionals design together with people. She predicts the next stage will be “Collective Dreaming”, where people will leverage the power of collective networks to produce design together.

Collective Dreaming is a time where spaces will be designed by people and I believe it is the responsibility of designers to provide people with the right type of tools to make design a collective activity. Tools that will allow people to deeply engage with spaces, understand them, ideate, visualize and validate future scenarios as a collective.

The future of design lies in its democratization, where people can collectively explore and imagine what their environments can look like. Giving design power to people is about giving communities tools to shape their future.

I think we are now entering a new era that is powered by technology and by people. An era that will redefine roles and will enable collective creativity, which will be a huge benefit for society as a whole. Design that is informed by people can improve the social capital of places, communities’ wellbeing and the overall livelihood and joy of people who live or use those spaces.

Luckily technology is becoming more advanced and is enabling us to do things in ways that were not previously possible. For example, virtual immersive environments enable us to co-create while being in different locations. And I believe this is what the future holds: humanity will see increasing value in collective creativity and will keep developing new tools to enable us to advance and develop our collective intelligence.

Conflict of Interest

None declared.

Конфликт интересов

Не указан.

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