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From Design Thinking to Designing Inclusive Collaborations

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An Introduction to
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Abstract

With the increasing complexity of basically anything that conditions our economies and societies there are no final and complete solutions. Everything we do is a contribution to greater systems. Nothing exists in isolation. We need several disciplines and perspectives to respond to the challenges people and organizations are facing. With the ambition to recognize inequalities and to strive for diversity, equity, and inclusion, it would be time to move from a to-do list to action. There is an urgent need for the inclusion of underrepresented communities and for a response to racism beyond solidarity - the most precious response is to start collaborating. In an international setting this also means that we open up and allow for diversity, instead of resorting to assessing compatibility with our systems. If we recognize and integrate diverse cultural content, values, and knowledge, we can better respond and design for social and economic needs and address burning issues such as climate change and immigration. In design, we evolved our practices from applying individual design styles, to designing for corporations, to designing for users. In "Design Research" an inclusive approach has been evolving that does not translate insights, but facilitates diverse contributions to unveil new opportunities. For participatory co-design methods, diversity is not just an ambition, but a driver for innovation.

Keywords: strategic design, design research, diversity-equity-inclusion, design for living systems, coalition building

Introduction: History of an Evolving Design Approach

Over the past century design evolved from design styles, to design movements, to design languages of corporations and their comprehensive appearance of products and services as an integrative part of their corporate identity. Streamline design, for instance, reflected a zeitgeist which was influenced by technological achievements and represented speed. Here, even an ashtray looked "fast". With star designers, such as Ettore Sottsass or Philippe Starck, design styles became expressions of individuals. Movements such as *Memphis* or *Alchimia* designed objects with recognizable appearance and philosophy. Those were contrasting arrangements of different textures, styles, materials, and forms. One of the founders, Alessandro Mendini said:

> "There is hardly anything in our daily lives that has not been designed" and "everything has been designed – no new form is possible."[1]

The combination of different designs in one object evolved design by combining individual design styles. From a purely aesthetic perspective, it could be seen as an attempt to embrace diverse artistic design expressions.

Design languages also evolved by representing a corporation's overall appearance of their products, services, and Corporate Identity. In the case of "Braun Design", it reflected not only design style but a unique approach to creating functional products with minimalistic appearance[2]. Designers moved on from establishing an own design style, to designing for corporations.

With new technologies for mobile and web communications not only an appearance had to be designed, but the interface: how people interact with a product and its functions, how a service is delivered and used. Interaction design put the user in the center, service- and UX-design extended the reach and impact of design practice. After numerous success stories that did not only contribute to the creation of new product categories but impacted the way we live and work, corporations became interested in *how* designers work, and the evolving design process addressed the organizational design, helping companies to innovate within their organizational structures.

One of the key characteristics of both UX design and organizational design is the collaboration with various disciplines and stakeholders. Whilst design scratches all relevant areas at the surface, in each area there are experts, whose expertise the design development needed. Designers had to learn to work with different disciplines to better understand the impact new product and service areas will have. It had to be tested, if for instance it will be perceived as intuitive, if the arrow on the screen moves upwards, when we move a new device to interact with

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[1]Pieter E. Vermaas and Stéphane Vial, Advancements in the Philosophy of Design, Design Research Foundations, Springer International Publishing AG 2018 ISBN 978-3-319-73301-2. The Design of Nothing: A Working Philosophy, p. 559. On The Utility of the Uselessness, Kazuko Sato and Alessandro Mendini. ALCHIMIA: Italienisches Design Der Gegenwart, Kazuko Sato, Taco Verlagsgesellschaft und Agentur, 1988, ISBN13: 9783892680338.

[2]Klaus Klemp, Keiko Ueki-Polet, Less and More – The Design Ethos of Dieter Rams, gestalten, 2015. ISBN-13: 978-3899555844.

the screen forward[3]. In this period of integrating technological innovations into every day's products during the late eighties and nineties the iterative approach 'design thinking' evolved - designers had a key role in bringing together and leading multidisciplinary project teams. In 2005 Hasso Plattner, co-founder of SAP invested 50 million dollars in the d-school, led by former CEO of IDEO, David Kelley, and located at the center of the Stanford Campus: design thinking should innovate in all directions, collaborating with all disciplines:

> "It has been my dream to bring faculty and students from different departments together to tackle interesting needs and innovations," said David Kelley, the institute's founder and Donald W. Whittier Professor of Mechanical Engineering. "These collaborations will enable us to mine deeper than individual disciplines can alone."[4]

The design approach continued its evolution and reach with Strategic Design, as it has been evolving already in the first master's program in this field at the *Politecnico di Milano* in 1999. Here design methods and approaches have been applied also to understand and evolve societal developments. The founder of the program, Prof. Ezio Manzini initialized in 2006 the DESIS network of design schools around the globe that work on social change and sustainability[5]. In his book *Design, when everybody designs: an introduction to design for social innovation* Manzini writes:

> "The social conversation is, to all intents and purposes, a co-designing activity: a dynamic process in which participants intervene bringing their own particular knowledge and designing capacity."[6]

In this essay a possible evolution of the design process, from designing based on insights towards facilitating inclusive co-design processes, will be described. It elaborates on the need to include a wider spectrum of perspectives to address current design challenges.

Methodology

The contents relate in part to my direct experience with the evolution of design as a design consultant working for one of the founders of the *Memphis* movement Michele De Lucchi in Milan, and for the American design and consulting firm IDEO. Design consulting has been contrasted with my insights as a co-founder of an aviation firm for humanitarian flights in the Democratic Republic of the Congo and my teaching at the *Politecnico di Milano* and *Parsons,* evolving "Design Research" approaches and methods. The reviewed literature of

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[3]https://www.ideo.com/case-study/creating-the-first-usable-mouse.
[4]https://news.stanford.edu/news/2005/october12/design-101205.html.
[5]https://www.desisnetwork.org/about/.
[6]Ezio Manzini, Design, when everybody designs : an introduction to design for social innovation, The MIT Press 2015, p. 63.

the authors Boaventura de Sousa, Freire and Escobar describe the oppression of cultures in the southern hemisphere and ask for the decolonization of design, while Manzini elaborates with his book and his work as founder of the DESIS network the potential of the design approach for social innovation and sustainability. The evolving practice of "Design Research" is finally interpreted as a tool to move beyond the interpretations of western design competence by bringing together diverse perspectives, showing a direction to move from design thinking to designing inclusive collaborations.

Experiences from a Career in Design Consulting

I was visiting Alessandro Mendini's Studio, *Atelier Mendini*, in 1989. In a conversation Mendini mentioned that in Italy, at his newly formed *Domus Academy*, as well as at the *Isitituto Europeo di Design,* founded a couple of years earlier, the education would not focus on the skillset to actually design, but elaborate on the reasons why we design something. As I have been rejected at German Design Schools for a lack of talent in visualization skills – I have an education in music – I decided to study in Italy to follow my ambitions to become a designer.

After my studies at the *Istituto Europe di Design* I was working at the *Studio De Lucchi* in Milan from 1993 to 1996, when we were growing from a team of 12 to over 50. De Lucchi and his partners Nicholas Bewick and Angelo De Michelis won a competition to design the branches of *Deutsche Bank*[7], one year before De Lucchi became head of *Olivetti Design*. Together with his highly successful designs, such as the *Tolomeo* lamp for *Artemide*, De Lucchi was recognized as one of the most famous Architects in Europe. Those of us who were leading projects for the clients of the Studio however had leeway to lead the design development, as in our roles we had the closest understanding of our client's history, capacity, and goals. It was our ambition to build long term relationships with our clients, to design for their entire product range, related services and evolving corporate identity. I was working on the design of an office furniture systems, an area that was changing with the integration of technology and new approaches to collaboration in organizations. With our design we had to focus on people and the way they work, not on the handwriting of a star designer or solely on the identity of a company.

In my career, this was the moment when the user and use scenarios became the focal point of my work. In 1996 I met Tim Brown at IDEO. In Europe, the *Nokia* user interface became an iconic success story that intrigued corporations[8], it also represented a turning point - customers identified with the interaction design, how a product works and delivers a service, and not with the outer appearance. In a way, products became "alive". We illustrated the way we design at IDEO for our

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[7]aMDL archive: https://www.archive.amdl.it/en/index.asp?f=/en/archive/view.asp?ID=280&h=archive.

[8]Karime Mimoun, A Strategic Exploration of Nokia's Success, GRIN Verlag, 2009, ISBN 978-3640338214.

clients, later this modular description of an iterative design process turned into the marketing friendly term "design thinking":

> "… a human-centered approach to innovation that draws from the designer's toolkit to integrate the needs of people, the possibilities of technology, and the requirements for business success"[9]

During the mid-nineties, the number of interaction designers grew, there was also an increasing number of anthropologists, sociologists and psychologists in our teams that complemented the ergonomists of the industrial design era. With the crusade of technological innovations, we designed projects that had no precedents, we needed to work with these disciplines to understand how to integrate technologies in products with new functionalities that impacted the way people live and work.

I was building a collaboration with the *Deutsche Telekom AG*, that after the IPO in 1996 lost its monopole and had to compete in an open market. The CEO, Ron Sommer, understood that the corporation had to evolve their products and services to do so. The former *Nokia* manager Michael Schmohl, responsible for *Deutsche Telekom AG* products at the time, followed our suggestion to develop new products with a new *Deutsche Telekom AG* user interface that should be part of an overall usability strategy. We designed the *t-concept* product range and its interface concept, but we did not succeed with our work on a usability strategy for the company in these years of fundamental organizational change (Figure 1).

Figure 1. *IF Yearbook, Best User Interface in 1996 for the "t-Concept" Product Line*

My takeaway from this project was the impact that our user observations had on the executive board. Together with an anthropologist I traveled the country and we observed people while using their phone in their homes or at their workplace.

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[9]https://designthinking.ideo.com.

My colleague knew how to make people feel comfortable to say what they really think of how these services work and what they would need. This frequently differed from what they said at the beginning of our encounters, where they conveyed what they thought they should say. Ever since I experienced our video presentations of observations of people in real life settings as the most powerful tool to convince decision makers to invest in human centered design (Figure 2). Their costly market surveys do not get under the skin of people to unveil a collective subconscious.

Figure 2. *Deutsche Telekom, IDEO 1996, Observations of People Using Phone Services*

In our design teams we codified the insights of the observations and analyzed the findings with multidisciplinary teams. We believed in the potential to find innovative, new solutions when different expertise comes together and shares a variety of perspectives. As I had already lived in various countries, I was convinced that also different cultural perspectives can enrich project work, but the level of education of my peers in these western countries also leveled out our cultural backgrounds. After the millennium I looked for new opportunities. I met people from the Democratic Republic of the Congo (DRC) who believed in the democratization of the country and became co-founder of an airline for humanitarian flights in 2001. We were flying goods for the newly elected government to the war zones in the Kivu region, and refugees back to Kinshasa. We built a local team of 52 employees. I was the only white person amongst the founders and the employees, and I understood that I knew by far too little about their realities to be able to contribute with processes or solutions. I focused on the development of a business plan and took care of the relations with the European investors until we managed to pay back the investments and dissolved the founder's structure in August 2004 (Figure 3). We handed the company over to the local team who led the company until the government confiscated all aircrafts in

Kinshasa on April 28, 2008, through the Air Force who operated the vessels and all flights afterwards[10].

I learned about the discriminations this country has been facing over the centuries, the systemic exploitation of the resources that are the reason for a devastating war[11] which hardly finds any coverage in the media, even though the United Nations has its largest and third most expensive contingent in this country, first the MONUC, which was replaced by the MONUSCO in 2010[12]. The Congo covers with criminal exploitations through external forces for volatile global demand in Tantalum, which is needed for high performance capacitors in mobile phones, navigation systems, digital cameras, etc.[13]. In a mobile phone, design approaches that put people at the center of development processes, and the destiny of the people in the Congo are close together.

Today, large parts of the infrastructure of the country are owned by China[14]. Over the past five hundred years, the Congolese never had, not for one moment, the opportunity to do with their country, one of the richest areas in the world, what they want.

Figure 3. *EWA Flight for the DRC Government in November 2003 Kisangani – Kinshasa*

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[10]FARDC N 01/00112/EMFA é/Dept Ops/Dur Ops/08, Numbi Ngoie, Chef d'Etat, Force Arienne DC.

[11]https://httpss://reliefweb.int/report/democratic-republic-congo/coltan-and-conflict-drc.

[12]https://peacekeeping.un.org/en/mission/past/monuc/.

[13]https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1752822.

[14]https://www.reuters.com/business/congos-6-bln-china-mining-deal-unconscionable-says-draft-report-2021-10-08/.

I also learned about the enormous potential and opportunities the country would have, from their creativity in finding solutions, to their resilience in coping with extreme situations, in particular women and their entrepreneurial activities of survival, such as the "Maman maraìcher" who cultivate any little land parcel in and around Kinshasa, or the "femme comercante"[15]

I started teaching, engaging others to design and explored potential applications of the design process in areas for intervention beyond the traditional borders of product, service and interaction design. I was looking for international student bodies and taught at the Master Strategic Design at the *Politecnico* di Milano, *Carleton* University in Canada, and several other Design and MBA programs until I took on my position as Associate Professor for Strategic Design at *Parsons* in New York[16]. Here, I worked on my vision of an international master that integrates any professional background in project-based learning. I designed and have been leading the capstone project courses "Design Research" and "Design Strategy" where students unveil opportunities in areas that are in need of innovation and strategize a path towards implementation.

In these courses I advise on process, not on content. I guide heterogeneous student groups to apply a fast-evolving design process in most diverse areas that need new solutions. I evolved online formats for project-based studio courses as here students can work from home, from their environments, and enrich our learning spaces and projects with local perspectives. I believe in the potential of online education, for increased access to education, but also to build on diversity as referenced in my feature in EDUCAUSE: *Reimagining Online Culture: Project-Based Learning, Inclusion, and Reach in Online Education* from April 29, 2021[17]. I realized that when working from home and building a global classroom, students do not aim to comply with western design and business cultures, as they do when they come to a classroom in 5th Avenue. Online, a new pride comes to light, and with that new insights and perspectives which enrich our project work.

Besides my teaching I work as an executive coach and advise on organizational design. Those change processes are mostly forced by external factors. Over the past few years, I do not get approached with the request to design for a specific area or solution, but with the request to find ways to address challenges that might impact the future success or even survival of my clients. Those challenges have become increasingly complex. There is not one best concept or one great design that can help people, groups, organizations, or companies to face challenges such as changing societies, climate change, urban developments, or new dynamics at the workplace. To embrace these complexities, we need to see a possibly wide spectrum of perspectives and we need to respond with systemic interventions, design for living systems that can evolve and adapt.

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[15]https://www.worldbank.org/en/news/feature/2017/01/10/what-does-it-mean-to-be-a-woman-entrepreneur-in-the-democratic-republic-of-congo. Charlotte Mwamini Nafisa, La femme commerçante en Afrique et l'éducation des enfants: Le cas de la République Démocratique du Congo, L'Harmattan, January 01, 2009, ISBN13 978-2296074583.

[16]https://parsons.edu/bba/the-school-for-design-strategies-welcomes-christian-schneider-to-full-time-faculty/.

[17]https://er.educause.edu/articles/2021/4/reimagining-online-culture-project-based-learning-inclusion-and-reach-in-online-education.

The attempt to engage people to learn from them and then translate the learnings into a design does not make sense in this context. We should create spaces for contributions instead and engage diverse people to design new solutions.

Inequality

In 2008 I wrote about the potential of design thinking to engage cultural diversity in global economies in my book *Papewas, Erzählungen von Kulturen, Innovation und Wirtschaft* (Tales of Cultures, Innovation and Economies)[18]. With examples from experienced scenarios in the DRC, but also in an isolated valley in Italy, and encounters with first nations in Canada, I describe the limitations of forcing diverse cultural contents in a subordinate system, which hinders economic solidarity as a driver for development and progress, whether we work with undeserved communities, oppressed cultures, or entire nations. There could be a reciprocal benefit through the integration of diverse cultural knowledge in addressing climate change, immigration, and social change. It would be also the approach of the innovation culture in design: it is important that we are diverse - and interact. The UN declaration on the rights of indigenous people (UNDRIP) of September 13, 2007, ensures "the right to remain distinct"[19]. A basic right that would help to maintain cultural knowledge which is ultimately of utmost importance for survival. On this planet there are people that learned to survive in any climate, whether it is the Arctic or the Sahara.

The value of diversity for innovation is not recognized when western nations aim to integrate immigrants or evolving economies in their existing systems. Instead of assorting how a diverse perspective could enrich a discipline, profession, or economic sector, we assess for instance how the education or an individual from a different nation does *not* correspond to a national scheme. Boaventura de Sousa writes:

> "… it looks as if colonialism has disabled the global North from learning in non-colonial terms, that is, in terms that allows for the existence of histories other than the universal history of the West"[20]

Starting around the millennium it became popular that western design consulting firms started working on products for the developing world. There have been projects such as the foot water pump designed by IDEO for *ApproTEC* to be used by farmers in Kenia[21]. There have been also academic institutions that launched guidelines such as the 'Design for Sustainability - A Practical Approach

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[18]Franz Christian Schneider, Papewas: Erzählungen von Kulturen, Innovation und Wirtschaft, BoD Hamburg, 1. Edition, 2009, ISBN-13: 978-3837032222.
[19]UN Declaration on the Rights of Indigenous People of September 13, 2007. https://www.ohchr.org/en/issues/ipeoples/pages/declaration.aspx.
[20]Boaventura de Souza, 'Epistemologies of the South: justice against epistemicide', p. 19.
[21]https://www.idsa.org/awards/idea/commercial-industrial-products/approtec-moneymaker-deep-lift-pump.

for Developing Economies' developed by the TU Delft, the German *Inwent* and the UNEP. After centuries of oppressions, rolling washing machines and solar lamps were designed for those nations that had been considered for the exploitation of people and resources, and not for the integration in a global economic system.

William Kamkwamba instead showed, where access to knowledge can lead to. He saw the picture of the construction of a windmill and built one himself, to generate electricity for his village in Malawi[22], as well as a solar powered water pump. It might be a rather isolated case due to the lack of access, but it could serve as one example for western nations how to integrate evolving economies by sharing knowledge, resources, and funding for the benefit of all. William Kamkwamba was named as one of the "30 people under 30 changing the world" by TIMES magazine in 2013[23].

In design this is a rare case, as people from underserved communities rarely represent an active part of the design process, as Escobar describes in his book 'Designs for the Pluriverse:

> "Questions of class, gender, race, and coloniality are notoriously absent from most design theory and practice, and so is that of design's dependence on capitalism"[24]

In 2020, the systemic oppression and killing of POC in the USA led to an outcry which was followed by the consistent presence of POC in many ads and possibly every picture a corporation shares of itself in an attempt of equity washing - instead of taking on the responsibility for the past and present, the lack of access to education, unbiased integration and participation of POC in life and work. In theory, this would be a moment to communicate and involve design approaches in societal and organizational developments, to respond to inequalities, empower people and to actually build on diversity. Besides pluriversal design, the decolonization of design, the commonly used jargon extends to participatory design, even though this practice goes back to Scandinavia and the seventies of the past century.

In the following I attempt to describe "Design Research", thus the practice of unveiling opportunities in an area that is in need of innovation, referring to the nuances that make this approach successful by working from the outside in, by making others design, and not by working from the inside out, with own interpretations of what we see from our perspective, like star designers, corporations and western economies do. To cite Escobar again,

> "One of the most profound— and even damaging— consequences of the rationalistic tradition is the belief in the individual. This belief, one might say, constitutes one of design's main wicked problems."[25]

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[22]William Kamkwamba, The Boy Who Harnessed the Wind - Creating Currents of Electricity and Hope, HarperCollins, 2009, ISBN 9780061730320.
[23]https://ideas.time.com/2013/12/06/these-are-the-30-people-under-30-changing-the-world/slide/william-kamkwamba/.
[24]Arturo Escobar, Designs for the Pluriverse : Radical Interdependence, Autonomy, and the Making of Worlds', p. 58.

"Design Research" as a Process of Inclusivity

The described process originates in my work with IDEO, it builds on real life observations as commonly practiced in "design thinking". Over the past ten years at *Parsons*, working with international students with different professional backgrounds in my master's courses, I evolved this approach, always responding to my learnings in my practice working with industry. Most of the principles of design thinking find application in a process that is commonly referred to as "Design Research".

Even though it is an iterative process, it is based on core modules: We work on quantitative, secondary research, challenge this data with qualitative insights from real-life observations, which are open conversations with people from our target groups. We then engage experts from relating disciplines, discuss our research finding with them. We do brainstorm sessions and workshops to generate a range of ideas. We learned to integrate diverse *disciplines* in our development processes. Paolo Freire refers to the limitation of western business *cultures* and the immense value of cultural diversity:

> "In cultural synthesis—and only in cultural synthesis—it is possible to resolve the contradiction between the world view of the leaders and that of the people, to the enrichment of both. Cultural synthesis does not deny the differences between the two views; indeed, it is based on these differences."[26]

What makes design research different from other research methods is that we do not work towards assumptions, ideas, or visions. It is quite the opposite. We apply tools to understand and to illuminate an area that is in need of innovation but what the directions and opportunities are, we will know at the end of the process. We constantly open up throughout this process, and do not narrow down. We work with a variety of very different people and their professions. Our work should never be personal, self-centric, pretentious, or individual in any way. The success of our work depends on our capacity to engage, to bring together, to translate, to see what really matters to others. We work towards critique and failure, not to gather proofs for our thinking. We need to gather and value diverse inputs in order to evolve a successful concept. With all our tools we strive to come across the unexpected. It is always a surprise that leads to an innovation opportunity.

There is a common understanding that in "Design Research", once we have relevant data and understand the user group's needs and expert's insights, we "connect the dots", as described in the commonly used "sensemaking" in the design jargon[27].

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[25] Arturo Escobar, Designs for the Pluriverse : Radical Interdependence, Autonomy, and the Making of Worlds', p. 83.

[26] Paulo Freire 1921-1997, Pedagogy of the oppressed, p. 181.

[27] Jon Kolko, Sensemaking and Framing: A Theoretical Reflection on Perspective in Design Synthesis, Design Research Society, Digital Library, 2010.

If it is us that "make sense", if the research team makes choices of which paths to follow, but also if we translate all the learnings into a concept for a project, it is still us that decide, choose, create, and inevitably we will manipulate the inputs, make decisions based on our biases, limit the spectrum of diverse contributions.

The visualizations from our secondary research should be used as a tool to engage people in our observations to challenge the status quo. We should then use both the data, the insights from observations and knowledge form experts to engage others to come up with ideas. As we facilitate these engagements, we should not filter any of the inputs, narrow down, but strive to get a possibly wide spectrum of ideas, designs and solutions. It is a different mindset: we do not hold brainstorming sessions to get inspired. Brainstorming sessions are not for us, to come up with a great idea, but should motivate others, to come up with many ideas. We do not strive for inputs and contributions so that we codify the learnings into a solution *we* design, but we step back from any judgement and evaluation to create a space where people feel free to build on their ideas. Therefore, each step on our way should always serve to open up more, to get a maximum diversity of ideas, solutions, and potential project leads.

We will finally place every input in from of a short paragraph or sketch on a map. It should be a huge map that shows possibly everything that could be done in the research area we are working on. There are no limitations on feasibility, no judgment on quality of contributions, there is no perfectionism allowed (Figure 4).

Figure 4. *Marco Maria Pedrazzo, Design Research on Earthquake Management in Italy, MS SDM at Parsons, 2017: Opportunity Map with Thematic Clusters Based on the Input Received from Stakeholders and the Affected People*

We will move around these inputs, place them in groups and see if there are themes evolving. There might be a variety of themes and structures, they might connect and relate in various ways. The inputs are like puzzle pieces, just that there

is not only one way how you can connect them to create a picture, there are various ways (Figure 5).

Figure 5. *Regina Law, Design Research on Access to Money Management, MS SDM at Parsons, 2017*
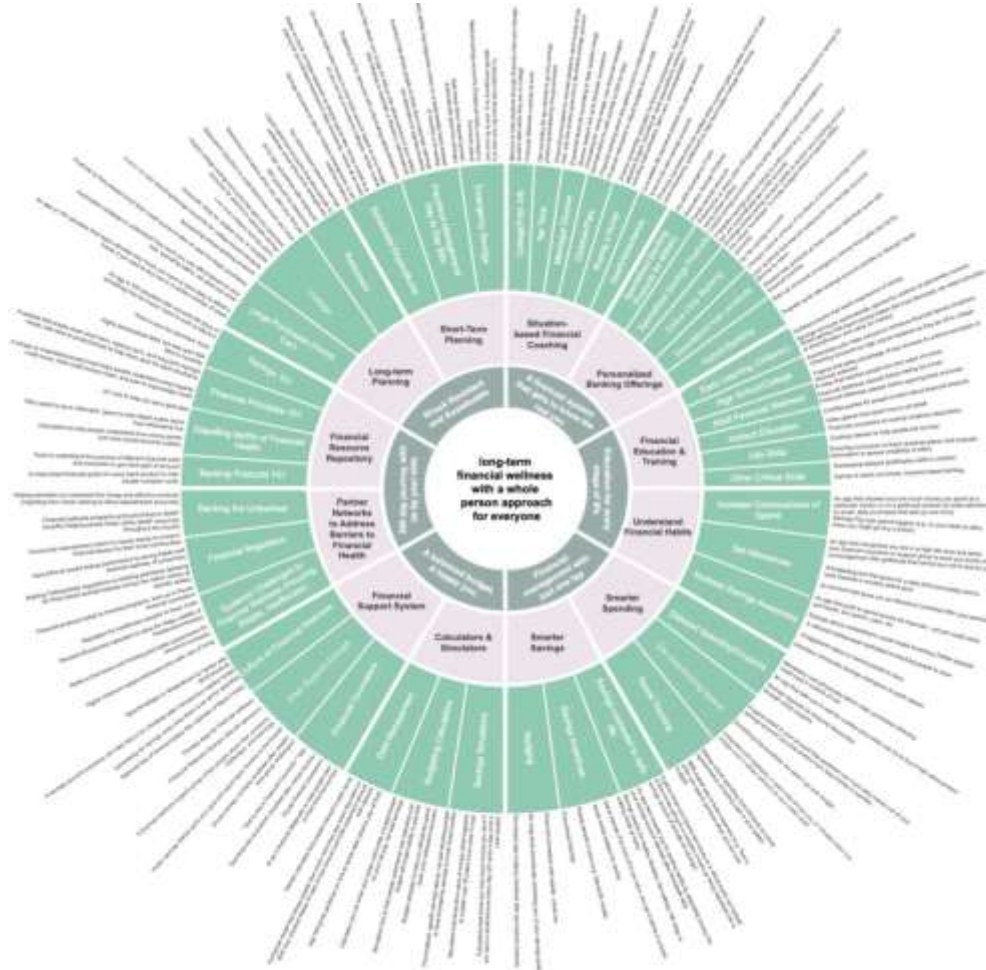
While creating various thematic clusters, and discovering the co-relations of the inputs, we will see that there is a core, a center that relates to all these themes. It serves as a common denominator, a statement that could be the first sentence of a design brief for any of the ideas on the map. It is the purpose of a project. Everything on this map are functions to satisfy this purpose.

We will not implement all the leads on this map at once, but together they form a system that can change and evolve. Everything is connected to something and a part of a wider network. This approach has impact if it builds on a possibly diverse range of inputs. In most simple terms, we stop designing for others and make others design. We stop assessing the outcomes to integrate in our systems but expand our systems or accept that there are new systems emerging.

Inclusive Design Approach in Organizations

In this process, it would be best to work on an area for the first time, something we are not acquainted with, so we have no preconceptions, anticipated outcomes, or opinions during the developments in this process. Of course, companies are experts in their fields, and many start up founders work in the areas of their competence. However, in this process we are not the experts, but the facilitators that bring together diverse experiences and expertise. We can simulate this scenario in workshops when members of departments defend perspectives of other departments.

This approach should be assimilated and practiced at all management levels to avoid roadblocks during the implementation of change processes in an organization. It could work as a tool to prevent failure as described in the dissertation of Dr. Arnaldo Cacaci[28], by including employees in the development of change processes to address a challenge or task.

In my activity as executive mentor and consultant on organizational design, innovation and change processes, I experienced rigid structures and toxic work environments as the main cause for the reluctance to assimilate core principles of an inclusive design approach. Mid-level managers might have most relevant experiences in a range of expertise their department covers, however the prerequisites for group leadership are not necessarily based on competence or seniority. The development and implementation of new solutions, practices and processes require adequate leadership training. There is a misconception that leeway and a flat hierarchy alone would be the solution for inclusive collaboration. Co-workers, who had to integrate themselves into a controlled system, are pushed towards self-engaged, free thinking and they are expected to take on ownership, frequently in environments where there is no space and structure for their contributions.

On all organizational levels we need to make decision-making processes transparent, build and visualize models of communication flows. Managers and leaders, without adequate training on how to provide guidance to people, tend to make top-down, on-off decisions. Competing frequently outweighs collaboration as it is all about "winning".

Building inclusive collaborative spaces starts with the recognition of challenges that impact the whole or part of an organization. The definition of a commonly shared overall purpose and shared values should evolve with the participation and mandate of a possibly comprehensive and heterogeneous group of people. Whilst internal change processes are key to change and innovation management, most challenges corporations are facing today are external factors, areas that the in-house know-how is not necessarily acquainted with. Our most burning issues are related to sustainability and social change with an increasing awareness of inequalities in our societies and workforces.

Instead of defining a goal or vision to deal with these challenges, we should describe an area that needs new solutions and work on who we can involve in the

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[28]Arnaldo Cacaci, Change Management - Widerstände gegen den Wandel: Die professionelle Change Arena- ein System der Prävention, pp. 199-242.

process: the people that are impacted in this area, and experts whose knowledge we need in this process. We aim for a possibly wide spectrum of contributors. One simple benefit of working remotely, is that we can create a diverse project team with possibly international and multicultural contributors. During the pandemic, we learned how to collaborate online better, which does not mean that we met perfection[29].

"Design Research" Nuances

The iteration of understanding requirements from client organizations and the work with students in explorative and experimental ways, led to the creation of always evolving guidelines describing the "Design Research" process[30]. It is a methodology to unveil opportunities by engaging others, building on diversity, and embracing the complexity of challenges and possible solutions with an inclusive, and not self-centric way of working.

Each step along the way we should write down our own perception, bias, opinion, fear, or vision before we start on a module. Whether working on secondary or primary research, we should strive to contradict our assumptions. Only with this approach we can manage to get out of our silos and comfort zones. We might subconsciously select and judge our findings, and we manipulate the process already by choosing who we engage in the process.

We can trick ourselves if we try to always proof the opposite of an expected outcome. We will have valuable contributions if we change perspective and illuminate an area we are working on with input from a different, analogue area that is not directly related. Same applies to people we involve in the process. We should always contrast any profile we assign, for instance not define target groups by age - why shouldn't an elderly person use an app, technological products and applications? Beyond age, to include and illuminate cultural and social diversity is not only an ethical responsibility. To receive diverse inputs enhances the chances that we discover what we did not anticipate. The parameter to assess our work is simply if we came across something unexpected.

In "Design Research" we challenge quantitative information from secondary research with qualitative insights that we receive from people in observations and open conversations. Up to this point it is still us, analyzing, facilitating, engaging, and finally designing the presentations of our work. After this phase of connected secondary and primary research, we should use this work to engage others to reflect on the findings and insights, engage others to come up with ideas, solutions, visions. It is a rather difficult task that requires trust in the process. We first challenge the concepts and research from stakeholders and clients, and when we finally present our findings, we ask to open up and get a whole range of potential project leads. As soon as we are convinced that we came across a perfect solution, we need to move on. We should see it as an ambition for our work to find

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[29]Franz Christian Schneider, DEI in online education, EDUCAUSE, 2021. https://members. educause.edu/christian-schneider.
[30]https://www.researchgate.net/publication/342216379_Design_Research_Guidelines.

solutions that are not *best of*, but many solutions that are *good for* the purpose of our project. Only when we have this wider range of inputs, we can see a commonly shared purpose, the center of the opportunity map, and a system of solutions, functions and actions that serve to satisfy this central purpose. Only by collaborating and by opening the space for contributions we can determine a commonly shared set of values that should be the foundation for any following development and implementation.

It is an enormous satisfaction to see the results of such a process that builds on the input from a diverse group of people – much greater than having a great idea yourself. It is fascinating to see what you could not see before. If a thorough development follows, this concept will have impact once implemented, as it evolves around human factors, it is rooted in the real world and real life, it comes from people and does not emerge from individual thinking.

Don't design for others but make others design. In this interpretation of "Design Research" lies a response to this perception of the limitations of design thinking:

> "people that use design thinking are often separate from the communities they are trying to understand: they go into the community to observe and then leave to create a solution"[31]

Conclusion: Coalition Building

There have been two developments that characterized the evolution of design consulting firms. The first have been mergers and acquisitions - big management consulting firms bought big design consulting firms and got even bigger. There have been mutual benefits by sharing client data bases, for management consulting firms design has been seen as an added value with its user centered methods, design could benefit from business competence and langauge. *Frog* was sold and acquired several times, *Accenture* bought *Fjord* and *?What If!* amongst others, *McKinsey* bought *Lunar*, PwC bought *Booz & Company*, and many other mergers of management and design consulting firms[32]. At the same time, also new, smaller design initiatives and strategic design consulting firms are evolving, many of those in the southern hemisphere. They show new perspectives on common challenges.

There is *Spread Design* in Bangalore, founded by Sonia Manchanda, which "enables conversation and co-creation between diverse talent" and provides space for diverse contributions through initiatives in their *Design Barn*[33]. There are networks such as the *Group of Humans*, a collective with diverse industry experts that share common values, and provide to their clients "connected thinking,

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[31]http://quicksand.co.in/media/publications/Unbox_Future-of-Human-Ecologies-compressed.pdf; https://www.fastcompany.com/3068235/want-to-fight-inequality-forget-design-thinking.
[32]https://sifted.eu/articles/innovation-agency-acquisitions/; https://www.wired.com/2015/05/co.nsulting-giant-mckinsey-bought-top-design-firm/; https://www.fastcompany.com/90172091/li fe-after-getting-swallowed-by-an-8-billion-company .
[33]https://spread.ooo, https://spread.ooo/barn/.

breaking out of company silos and traditional disciplines to bring ideas to life"[34] There are networks in Africa, such as *usable.* in Lagos, a community of over 600 ux-designers[35] or the even larger network of the *Friends of Figma*[36]. In India, the interdisciplinary consultancy *Quicksand* knows that "it matters that we enable a diverse range of people to play a part in anticipating and imagining how we could make things 'better'"[37], and *Dalberg Design* describes itself with: "We are from everywhere, at home anywhere – an African and American company as much as an Asian, Middle Eastern, and European one. We partner with and serve communities, governments, and companies throughout the world, providing an innovative mix of services"[38]

The evolving design approach as practiced in "design thinking" builds on observation of the target groups, human considerations, and the illumination of those insights from multiple disciplines, stakeholders in a comprehensive design process. However, by choosing who we connect with, by orchestrating the competences and inputs we receive, by codifying and "connecting the dots" of these insights we inevitably influence and manipulate this process.

The challenges we are facing in context with the global impact of our environmental, economic and societal developments ask for new perspectives, new, inclusive approaches to adapt not only the product and service world, but to evolve our established organizations and systems with strategic design interventions.

For the evolution of "Design Research", a methodology to unveil new solutions in areas that are in need of innovation, this means that it should not be us, from the established western world to define collaborative spaces, but to involve a possibly wide range of contributors to create those together. There is a variety of active contributors that contrast the big global players also in design. Any design intervention is always a contribution to a living system, an integration in wider networks, there is not one product, service, organizational setting, or system that can respond to the complexity of changing conditions that impact all of us - besides climate change this includes also immigration, a pandemic, changing workplaces, inequality, people empowerment, polarizations, misinformation, to name a few.

To approach new design initiatives and contributors, to build coalitions and address challenges for design together, we need the humility to meet at least on equal footing, in particular as we look back to centuries of exploitation. This applies to the way we live and work together, in our economic systems and at the workplace:

> "An overdue advancement of a democratic way of living and working together would be the development from freedom of speech to the free and independent contributions from everyone. What we do and how we do this says more than many words."[39]

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[34]https://www.groupofhumans.com.
[35]https://usable.ng.
[36]https://friends.figma.com/lagos/.
[37]http://quicksand.co.in/about.
[38]https://dalberg.com/who-we-are/.
[39]https://co-design.medium.com/collaboration-design-c148073aa2c4.

We should honor diversity, cultural content, allow spaces to evolve independently, create those spaces in our systems by working on the flexibility of the systems, and not on the adaption of new contributors to the existing formats. There is no privilege of the experience or tradition. Tradition is not the past itself; it is an evolution of the past. The only constant is change, and the understanding that integrated, diverse perspectives nurture innovation. It is the new, unconditioned perspective that puts new light on our challenges.

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