

Editors:

Loredana Di Lucchio
Angela Giambattista
Lorenzo Imbesi

CUMULUS THINK TANK
Publication No 4 of
Cumulus the Global Association
of Art and Design
Education and Research



ReVeDA: An investigation of Research by Art, Design, and Media in Cumulus Association

Editors

Loredana Di Lucchio
Angela Giambattista
Lorenzo Imbesi

Infographics

Marta Laureti

Layout

Teodora Ivkov

Graphic Design

The concept for the Cumulus Think Tank series cover was developed by Mariana Hint-Rääk, Estonian Academy of Arts, Estonia.

Cover image

Marta Laureti

For further information on Cumulus Association and Cumulus Think Tank Series

Cumulus Association,
c/o Aalto ARTS, PO BOX 31000,
FI-00076 Aalto, Finland
contact@cumulusassociation.org

Published by

Cumulus Association ry
Cumulus the Global Association of Art
and Design Education and Research.
www.cumulusassociation.org

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ISSN (Electronic) 2490-0486

ISBN (PDF) 978-952-7549-00-1

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**Cumulus the Global Association
of Art and Design**

Education and the Research

ReVeDA: An investigation of Research by Art, Design, and Media in Cumulus Association

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General*
Eija Salmi

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Preface

It is more than a pleasure and honor, as Cumulus Secretary General, to write the opening words of this volume.

"ReVeDA: an investigation of the research by art, design and media in Cumulus Association" is the first- ever publication of ReVeDA Working Group (Research Vectors in Design and Art) of Cumulus collecting the map of research among universities and colleges in art, design and media from all over the world. This publication is the 4th in the Cumulus Think Tank series as a product of all the activities carried on by this Cumulus Working Group (CWG) during the last years since 2013.

Cumulus Working Groups are unique open intensive thematic focused groups of voluntary individuals that are experts of a Cumulus member institution willing to present and to share their knowledge and experience in a particular field, discipline, or topic. ReVeDA is an action of passionate people, academics, students, and admins among Cumulus members inspiring them to share and meet online and onsite repeatedly. Sharing knowledge and best practices aim to add value to the work of an individual and the home institution, but also impacting positively the society and the planet. A CWG functions as a hybrid, but organizing its meeting also onsite during e.g., a Cumulus annual conference is typical for it. CWGs are fundamental thematic pillars of Cumulus association strengthening the affiliation of the members and the sense of community by sharing knowledge and best practices.

ReVeDA was born with these assumptions. This publishing project intends to draw a global map of research in art and design while drawing its fields of interest, the outcomes of the activities, the approaches, the tools, and the methodologies, but also its actors and the complex networks emerging among them. The general objective of the mapping is to return, through the description of the main characters of the research, a global image of the

current research within Cumulus community and to offer, starting from this snapshot, a broader reflection on the still open issues in design research. The book collects one research example from each Cumulus schools/university participant carried out by a survey, also offering an interpretation of the results using the infographics mapping.

The publication intensifies discourse about design research and stimulates it towards a construction of a common language of research in art and design. I wish the best for the future of ReVeDA CWG activities and additionally would like to thank on behalf of all Cumulusians all people who made this possible, to Mariana Amatullo, Loredana Di Lucchio and Lorenzo Imbesi, who passionately continued chairing this Cumulus Working Group, as well all who participated in the survey on research under the umbrella Cumulus.

I wish everybody will spend an inspiring and challenging time with this Cumulus publication!

Eija Salmi

Cumulus Secretary General

PART I

Introduction

Loredana Di Lucchio

Lorenzo Imbesi

Sapienza University of Rome

ReVeDA Working Group Chairs

Design appears to be a young discipline with a deeply rooted strong propensity for change. Such character is among the main factors of its large-scale success and at the same time it is also what makes it fragile, from a disciplinary point of view. The propensity for change contributes to making design highly adaptable and capable of responding to the complexity of the world we live in; on the other hand, it may trigger a process of recasting its actions, its approaches, renovating its status and questioning every time its disciplinary foundations.

Both the attitude for critical speculation and the practice towards participatory design strongly inspired by social innovation, have revolutionized in depth the character of the designer and his activity, while shifting the perimeter of its action, and re-thinking its own tools. Starting from its definition, the design discipline seems to break away from any form of classification and categorization. Despite the scientific community tried to frame a countless and assorted number of interpretations, it has not yet been possible to attribute a unique common definition, so keeping design as a surprisingly flexible activity including a plurality of ideas, research strategies and actions around the discipline itself.

The interest in investigating the territory of design research comes from the reflection about the epistemological nature of the discipline. Even though research, especially in arts and design, is often led by practice, the matter of research is intimately related with the theoretical speculation about the nature of the discipline, its objectives and impacts on society and the environment.

Since the start of our project, we were conscious that reflecting about design research should mean, at the same time, reflecting about the design discipline. Along with the plan to launch a call for Survey through the Cumulus community to map the main characters of research by art, design and media, we had to face also how to best illustrate their current principal features in design world-wide. ReVeDA should be considered also an infographic project to better understand and know our discipline at present time. Along with the birth of the design methods movement (1962), the scientific debate has focused on analyzing the research methods and approaches. At the same time, the failure to identify a single and unique method for design has increasingly given greater impor-

tance to topics and areas of application rather than to the related methodological aspects. At present, the scientific debate is spreading through a variety of platforms for dissemination such as congresses, research companies, and associations that have shifted the context of sharing for design research.

The mapping activities of ReVeDA were part of such scientific scenario characterized of ever more elusive fields, with the scope of re-questioning on the methods and the approaches through which design moves forward new knowledge and innovation, not only related to the economy and the market, but aimed more broadly at human ecology. Therefore, more than forty years after the conference on "Design, Science, Method" (1980), the purpose of ReVeDA was to start again to reflect about the gnoseological and scientific foundation of our field, and at the same time to record the approaches, the methods and the theories of design and arts research. The outcome was not to originate the ultimate normative model, but to explore the different ways of doing research in a plurality of distinctive contexts and to identify the factors in which the discipline is flourishing at present. The demand to mapping the current research in the field of art and design was therefore mainly driven by the objective to start an updated state of the art and opening a reflection in Cumulus on the emerging directions we are taking for the future.

Since every map is limited to a specific moment of space and time, we were aware of the limits of this project. As a result, ReVeDA is aimed to return a picture of the current global research in Cumulus, as food for thought to follow up with more analysis and reflection on the future of global design research.

The project was born as a Cumulus Working Group to map the current design research developed in more than 340 design schools around the world, that are members of the association. At first, we launched a survey as a tool for investigation, to collect the main descriptive aspects of research in the arts and design. The first mapping phase was characterized by developing the operational survey tool, which was a questionnaire. The drafting, validation and verification phase of the questionnaire was followed by the second phase, related to the dissemination of the questionnaire through a Call for Survey, which was delivered to more than

500 addresses, among which we received 70 research project descriptions from 32 schools located in 22 different countries. The results collected were subsequently processed and returned in a third and final phase for mapping through the development of a project of infographics. Adopting the infographic maps as a tool for reading the quantitative/qualitative data, allowed the possibility of establishing more evident connections and, accordingly, a more accessible analysis of the results of the map.

The book is simply organized into two parts.

Part I is a collection of short essays of eminent people from the Cumulus community, which were invited to share their vision about the current state of research in art and design.

Part II is the research report of the ReVeDA Cumulus Working Group and it describes the mapping activity (the scope, the methodology and the tools), so displaying the infographic results collected through the Call for Survey within the school members in Cumulus. The infographic project is divided into two sections: the first one is collecting all the research projects participating in the call for survey; the second one shows the synthesis of the results of the questionnaire. The maps are offering a double reading level: the first through the accumulation of data and the second through their synthesis. This choice comes from the awareness of the impossibility to draw a unique, single picture of contemporary research by art and design, but at the same time from the aim to display their main features and peculiarities.

The book is aimed to offer a glimpse on the state of art of the research in art and design as a starting point for future consideration and reflection. We expect that the outcomes of the map will support the development of research projects and networks in Cumulus, and additionally the methods and tools developed for collecting, analyzing, and returning the results will support to future mapping actions, so also becoming a tool for reflection and knowledge. From a broader perspective, the attempt to identify an evolving genuine research picture for design which is respecting diversity and cultures, as well time and places, may drive design investigation towards the common goal of establishing a shared vision and initiate a new dialogue on research within the Cumulus scientific community.

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Research as a driver of change?

Yrjö Sotamaa
Aalto University

Design for the Real World

The revolutionary year 1968 changed the world. It changed our values. It revolutionized the culture. It also changed my thinking and gave birth to an interest to research. I was Chairman of my University's Student Union. We wanted to challenge the current traditional thinking of design education. I had invited Buckminster Fuller, Victor Papanek, Hans Palmstierna, Christopher Alexander, and the Design Research Unit at the Royal College of Art to Finland to the legendary Suomenlinna Design Conference. The conference was created to discuss nothing less than mankind's future and its big challenges. The multidisciplinary approach of the conference, art+design+technology+business, and its themes laid the first seeds in my mind for the Aalto University, too, which came a reality in 2010.

The conference was about three main themes:

1. The emerging global social and environmental challenges,
2. Increasing the innovativeness of the industry to find solutions to these challenges,
3. Raising the awareness that design had a great potential in tackling the challenges.

We asked:

4. How design thinking should change to have broader impact in solving the big social, environmental, and industrial challenges and
5. How should we change and renew design education to realize the full potential of design (how to fill the gap between the opportunity and potential)?

These two questions defined my lifetime mission. Cumulus, which I founded with Professor Raimo Nikkanen in 1990 together with RCA and some other great design institutions is a result of this mission. I understood that research was in the core of raising design to a whole new level. The problems painted to us by Fuller, Papanek, Palmstierna and Alexander were big and complex, totally different than the simple design tasks we were trained to solve in our studies. They required new kind of design thinking. We needed to open our eyes, change our attitudes, and become interested to use our talent to solve the "real

world problems”. This was a mind blowing and energising challenge for our generation.

We felt that it was not enough to discuss these issues in a small group in a conference. We should make the whole design community aware of the “real world”. Therefore, I edited with my student colleagues the &SDO 68 Magazine, which published large articles by Papanek, Fuller, John McHale and many others.

The Magazine is still a rare symbol of the emerging new radical thinking and has been recently presented in two major exhibitions in England and Germany. The Conference and the Magazine did not only change my life, but they also paved the way for Papanek’s first book “Miljön och Miljonerna” and its world-famous English version “Design for the Real World”.

Research enters the agenda

My first modest attempt to understand the meaning and value of design research was part of my diploma work. Papanek had urged us to use our talent to solve problems related to minorities, like CP children. A design student team had built under his guidance a model of a “therapeutic play environment for handicapped children” in the Suomenlinna 1968 Conference. I wanted to test the hypothesis of whether such an environment would really have a positive social and physical impact on CP children living in a hospital environment or was the assumed impact just designer’s happy dream.

My Romping Room Project was built to the Rinnekoti Hospital in Finland where I conducted a study with a psychology student, Aino Sassi, of the expected impact. The study showed that the design did really have positive impact on children’s behaviour. The hypothesis was valid. The study also identified the specific design solutions, which had greatest impact in children’s behaviour. My work and the results got a lot of international publicity, which of course encouraged me to continue this path.

After few years of exploring the world in USA (with Papanek and Fuller), Canada, Mexico, Guatemala, El Salvador, Kenya, and Tanzania I returned to Finland. I was soon appointed to Head of Department by my Alma Mater, which had become in 1973 the University of Art and Design Helsinki. In 1980 I was elected to university’s Vice President

responsible for research. This gave me a rare opportunity to build a long-term strategy for making research a driver of change of art and design education. The turning point was 1983 when the University was given right to Doctorate Education as the first Nordic art and design institution and a pioneer in the world scale, too.

This was not an easy step for two main reasons. The old scientific universities in Finland resisted the change. They feared that “artist without formal research education would spoil the quality and reputation of research”. There were many sceptical people in the University itself who feared that “people who do not succeed as artist become researchers and spoil the quality and reputation of art and design”. We were fortunate to convince both, that we would be careful not to make this happen, by building slowly a solid foundation for research and doctorate studies.

The power of research to change institutions and design thinking

As we were pioneers on this path there was of course no previous experience or models to build the research and research studies in art and design. The model we adopted was “learning by doing”. Not an easy beginning and path at all. The time of living in a “birds-nest” was over.

But it was the bold beginning of making research a key driver of change of the University and powerful tool for increasing the impact of design in Finland

- research changed the idea of the traditional skills and experience-based art and design institution,
- research changed and broadened the intellectual culture of the University,
- it raised new critical questions and it forced us to look at art and design from new and multiple points of view,
- research helped us to make design thinking and process understandable to others,
- most importantly research brought knowledge creation as an important element to the side of experience and skills creation,
- theory and practice challenged and inspired each other.

All of this resulted to new opportunities for collaboration inside and outside of the University. Research by its nature is based on collaboration, which builds new valuable networks with best experts, institutions, and companies. This put design research to the right context. This also increased the overall intellectual resources of the university and of course the capacity to forward design research. All these aspects increased the credibility of design in the society and the institution itself.

Maybe the most important aspect of research was the principle of peer review, the idea of sharing knowledge and critical ideas. To discuss the problems of research and doctorate education we decided to organize a series of conferences, first of them in Helsinki 1984. We invited our colleagues all over the world, from England, USA, Germany, Netherlands, Sweden, Denmark, Canada, Norway, Poland, India, Italy, Japan, Korea, Brazil, Australia, France, and many others, to discuss these topics. Research together with internationalisation of the University's activities became the key drivers of change and slowly raising design education to a new world class level.

Cumulus is a most valuable forum for the growth of research

The birth of Cumulus was a result of two forces: my passion for building international collaboration and the end of the cold war. The biggest symbol of the cold war, the Berlin Wall, had collapsed in 1989. Ideals of democracy and collaboration spread like a virus in Europe. The famous ERASMUS Program opened for Finland in 1990. We decided immediately to use this opportunity. Royal College of Art, Danmarks Designskole, Gerrit Rietveld Academy, Universität Gesamthochschule Essen and Hochschule fuer Angewandte Kunst Wien, joined our initiative of founding a Network for student and teacher exchange.

In 2001 Cumulus became an Association and an International Association in 2006. In the early years of Cumulus there was vivid discussion of the nature of the Network: Elite Club for few of the best or a Network for sharing best practices for all. Europe was quite split as the result of the cold war. We thought that Cumulus could build most valuable bridges between the countries of divided Europe by bringing the art

and design schools together by the Association. By sharing the best practises, we could help the art and design schools of Europe renew their education, raise its level, and increase and broaden through this the impact of design. I am certain that Cumulus through its conferences and activities raised the general awareness of the potential of design in building innovation driven sustainable societies. Research was brought soon to the agenda of Cumulus. The conferences became important forums for educating young researchers. They build valuable networks for future collaboration and helped research become an essential part of the member school's agenda. This all had an important impact of raising the level of design education, which was still quite varied in the 1990's Europe.

Research becomes connected with the global mission of Cumulus

The step of coming an International Association was a long and difficult growth process. The world view of many members was very Europe centric. Many feared that the culture and position of Europe was threatened by Asian countries, mainly by China. On the end the idea of growth and development by sharing knowledge and best practices was stronger than the fear. New members started to join from all parts of the world. This was very important from the point of view of research as new memberships supported the growth of valuable world wide research networks.

An essential turning point for research and the mission of Cumulus was its first conference outside of Europe, in Kyoto 2008. Cumulus wanted to define a clear mission for future activities and was seeking for wider collaboration to increase the impact of design. The members of Cumulus, representing a global community of design educators and researchers, undertook therefore the initiative outlined in the Kyoto design declaration, to commit themselves to the ideals of sustainable development.

Furthermore, the members of Cumulus agreed to seek collaboration with educational and cultural institutions, companies, governments and government agencies, design and other professional associations and NGOs to promote the ideals of, and share their knowledge about, sustainable development.

The Declaration was based on the strong belief that design has the power to make fundamental improvements to our world. “Human-centered design thinking, when rooted in universal and sustainable principles, has the power to fundamentally improve our world. It can deliver economic, ecological, social and cultural benefits to all people, improve our quality of life and create optimism about the future and individual and shared happiness”.

The lesson and message

This article is an important message to the young students (and colleagues) in the Cumulus member universities and colleges: you should always have the courage to challenge the current thinking. Look fifty years ahead. Research is an excellent tool for these. Make your studies and work valuable. You should use your unique talent to create a better world.

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Design education: Research at the service of the new schools of management

Christian Guellerin
L'École de Design Nantes Atlantique

Design schools and universities are called upon to train the leaders of tomorrow, those capable of reconciling research and science, education, and society in general and ensuring that they resonate to redefine the notion of progress. The industrial era, the era of consumption and renewal of markets are coming to an end in favor of the emergence of a societal and ecological responsibility both to save mankind from the disorders caused by its hold on nature, and for those of the seizure of power by machines augmented par artificial intelligence.

Design schools: schools of leadership

Design schools have the chance to become the training institutions that produce the leaders of tomorrow, able to reconcile the economic and the social, and raise new questions about the notions of development and progress. Design is now a strategic discipline, in that reflections on future uses and innovation have become the driving force in companies.

In fact, there are countless examples of young graduate designers no longer afraid to take the plunge and start a new industrial and entrepreneurial adventure. A few years ago, they would have been content to protect their creation, then waiting quietly until an industrial firm be interested and enabled them to start receiving royalties on their genius invention. Today, when an idea is good, the obvious response is to share it, not defend it, and to push past the design stage, testing market ownership and the effect on uses, and becoming its promoter and entrepreneur. A new era is beginning for design schools, on the verge of producing the entrepreneurs and leaders of the future.

To prepare students for the highest ranks, the key would no longer lie in teaching them how to make money, but rather to help them explore the moral aspects of doing so. There is a paradox in this, for the way value is produced in a capitalist system cannot be a matter of virtue. The legality of the business they do is the only question that matters, as no company produces goods or services out of duty, and always out of interest. Morality, in other words, appeared irrelevant and raising questions about the moral responsibility of a company is akin to arguing over how many angels can dance on the head of a pin. Nevertheless, the work foreshadowed the current erratic reflections of a management class wavering between profitability and morality, a curious

dilemma when one considers that companies continue to encourage consumption when the appropriate response is precisely to save resources. To praise the moral character of capitalism is an absurdity: it is amoral; and it is all the better if the name of the game is to praise its advantages and benefits. Capitalism's virtue lies in producing wealth. What needs to be faulted is the inability of politicians to redistribute it fairly.

Flexibility, imagination, creativity, mobility, and tolerance were some of the qualities and skills needed by the managers of tomorrow, as if soft skills were finally taking precedence over know-how and accounting and financial techniques. The bosses will be more leaders than directors, more visionaries than technicians, more creative and innovative because based on the sole certainty of their know-how, more orchestra conductors than bosses.

Not so far ago, few design schools raised questions about their relations with companies, except to be wary of them. Working in partnership with economic structures that risked eroding the ability to create would have meant debasing the creative process. A fine array of diploma projects was enough to prove the students' creative capacity and therefore the quality of teaching. The school heads, professors and students were content with this, and still are, at many institutions snugly resting behind the impermeable walls of knowledge, the majesty of art, creation and the cultural itself. Company management, marketing and environment were virtually absent from the curricula, as though conceiving of a product with its market success in mind was tantamount to selling one's soul to the devil. The designers' responsibility was to create beautiful, functional, but by no means profitable objects, the act of selling befalling others. Students were ignorant of what companies wanted and did not learn the realities of industrial production or the harsh laws of the market until they were on the ground. "The best curve a product can have is its sales curve".

Raymond Loewy's words have never adorned the frontispiece of any design school. Admittedly, few companies had incorporated design into their worlds, except perhaps marginally and in a few selected sectors of activity. Design was not strategic and was often seen as a superfluous aesthetic element in companies rooted in 150 years of industrial hegemony and technological innovation implemented by engineers who, logically, sat in management positions.

Design has become a strategic and management discipline? Globalization, ecological awareness and digital have turned traditional models on end, and every organizational paradigm has been shaken. The consumer society, the pillar of an exultant capitalism and of the rise in standard of living in the global world, is now in question. For 170 years, the Taylor and Ford model was based on a scientific approach to management and organization. The aim is to “do better and better what we know how to do” by separating managers who think, determine procedures, and dictate rules from workers who are less and less qualified and confined to following instructions without thinking. They must do better than our competitors by optimizing added value creation and thus benefiting from competitive advantages. However, this paradigm only works if competition is fair, and all players are subject to the rules of the game. The arrival of new producers from emerging countries working at lower wage costs has reshuffled the deck. Why try to optimize processes to boost margin by a few points, when competitors’ labor costs are 2 or 3 times lower? The idea was to mobilize teams around the notion of a job well-done. The intention was commendable, and it was difficult not to buy in. However, standards and processes make things cumbersome and rigid, and hamper the ability to adapt to change by formatting minds: why explore any side-roads, when the course is clearly charted, without any possibility to stray. Quality taken to the height and excellence are often negations of intelligence that push management to authoritarianism, while flexibility, agility and adaptability become cardinal virtues. Despite being certain of the quality of their work, many companies have tumbled (but in “good order”), then gone under entirely, as they were unable to come up with a disruptive way to do business and thus bounce back. Quality used as a management method betrays a vision that is running out of steam and can even prevent the emergence of new forms of organization. The innovation paradigm is now used in lieu of the one modeled by Taylor. The objective is no longer to “do better and better”, but to be able to do “something else with what we know how to do”, lastingly and consistently. It is governed not by the exact science of engineers and technicians, but intuition, creativity, intellectual agility, and the entrepreneurial spirit. And as it happens, this paradigm is precisely that of design. La Poste faces certain extinction if it thinks its job is to

sort mail; its new job description consists of maintaining a social tie with a territory's population. Yet what new services will it use for this? Major retail Walmart (Carrefour, Auchan) will not survive if retailers continue to believe that their business consists of filling shelves, when the Internet has become the world's largest showcase. AXA and its counterparts sell car insurance. If tomorrow, vehicles become self-driving, will there still be accidents and therefore insurance? Likewise, will the Electricity provider (like Pacific Gas and Electricity Company) continue to distribute electricity to buildings that are energy-independent? This makes designers key players, as it is they who imagine, create, represent, open perspectives on new uses and model the future.

Design and innovation become strategic disciplines as companies become obliged to transform, to adapt to the tremendous upheavals in the economic and social contexts. The world of engineers is being replaced by that of creatives and designers. Marketing, too, is slated for a complete overhaul. One of its pillars was market renewal, to the extent that the Americans had raised planned obsolescence to a virtue that accelerates wealth generation. The emergence of ecological awareness and the absolute need to save resources now make it a necessity to consume more moderately and, above all, differently. Changing dishwashers or cars every 3 years is a heresy; manufacturers and the retailers will soon be demonized if they continue to contribute in this manner to the end of a resource-scarce humanity. The key now is to be responsible and frugal.

Marketing as it is still often taught is obsolete. The era of sharing is replacing that of individual consumption. According to philosopher Bernard Stiegler, a contribution society must emerge and put exchange, sharing and responsibility at the heart of a new way of consumption. For many companies, the idea is to adjust, think differently and move from products to service. The shifting economic circumstances, emergence of new economies backed up by different cultures, legislation, and opportunities, and our ecological awareness that requires us to revise all our thinking on production and consumption, call into question all the scientific models on which our management systems are built.

Design has become a strategic discipline, as all structures with questions about their future will have "innovation" as their square one.

Thinking design is an opportunity to transgress the old inoperative models and bring meaning and ambition back to action. The designer has that capability to represent, make tangible, make objective and show. While marketers consistently refer to the markets, designers imagine the uses of tomorrow whose market does not yet exist, thus affirming the primacy of uses on the markets. This speculation on the future, once it becomes tangible, is a formidable driver for uniting teams. Design becomes the driving force for management and involvement. As he/she represents and shows, the designer makes sense. Learning about design as a management discipline foreshadows the school and the organizations of tomorrow. The students, under the guidance of their teachers, share, experiment, test and reformulate. They are the ones who make the courses what they are, because they are the ones who are asked to have ideas. The role of teachers is to guide creativity without ever forcing it, encouraging it, helping new ideas come into being, correcting, providing support in times of doubt inherent in any foray down paths unknown, and provide reassurance in the event of error, thus making it possible to rise and start again.

Design, a research discipline or at the service of research?

The question is at the center of all research conferences. It is vain. Design has already produced enough knowledge for us not to return to this aesthetic quarrel between the relevance of design as a research discipline. This debate is about the sex of angels. More urgent and more important is to affirm that beyond its intrinsic value as a research discipline, it is worth underlining its extrinsic value. To limit design to a research discipline is to neglect that it is a formidable catalyst for all areas of research. Its ability to formulate differently, to cross disciplines, issues, to marry reflections, creation, concepts, and experience, to cross between science and consciousness, to connect the hand and the mind, to manage complex issues that borrow from several fields of knowledge make design the discipline that binds all disciplines together to give them resonance. Design is in essence a discipline of progress. To represent the world as it will be tomorrow is to represent desire, that which comes from the lack of what is not and what one wishes to want to be. It is to fill the void between what we

have and what we would like to possess. Representing it, building it, and offering it is exhilarating. In a disrupted, divided world, challenged by the climate emergency or by the “intelligent machine”, the designer has the dual responsibility of generating knowledge and projecting it to make it desirable. "Desire is the motor of the world" teaches us Aristotle. This is what we should display on the frontispiece of all design schools, those new schools of Management.

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Directories and maps for design research

Luisa Collina
Politecnico di Milano

The Cumulus Association is an international network of schools and universities in design, art and media, and I had the privilege of leading it for six years as president.

A network for doing what?

According to the Treccani dictionary, an authority on Italian culture a network can be figuratively considered as “a set of elements linked together in such a way as to form an interweave”. Hence, we use the term network to mean a set of people or things whose connection allows them to carry out task of collaboration, cooperation, or observation, aimed at the same goal (such an efficient business network or an effective network of cohesion); and in the world of construction, electro-welded mesh serves to redistribute loads which allows for greater resistance of the structural elements.

A network such as Cumulus thus serves to relate and collaborate; to protect one another; to help each other not to feel isolated but part of a larger whole; to share difficulties as well as to celebrate successes; to dialogue and debate; and to get angry; it also serves to complete and measure against each other; to watch and learn from those who are stronger, and to support those who are weaker; to stimulate to improve and not to give up...

It serves not to feel alone in an increasingly disrupted world.

How can a network like Cumulus support research in design and the art?

During my two terms as president (2013-2019), together with the Cumulus secretariat, the board, and the general assembly, we felt it necessary to start a working group expressly dedicated to research. ReVeDA was founded un 2014 and co-chaired by Mariana Amatullo (ArtCenter College of Design and later Parsons in New York), Loredana Di Lucchio and Lorenzo Imbesi (Sapienza University of Rome). Its primary aim was to offer an open space for discussion on research in art and design, while showcasing experiments developed within the Cumulus Community. Subsequently, in 2018, following an open call for working

groups, ReVeDA was progressively consolidated within the organization.

At the same time, a second call “for Cumulus Think Tanks” was launched with the intention of offering working groups the opportunity to realize their thoughts and share their knowledge with the larger community through a series of publications, part of the production costs of which were supported.

ReveDA immediately showed great interest in this opportunity; it joined the call and from there began a long gestation process that gave rise to the present volume: a meaningful publication that combines lists and maps as fundamental tools in an original way.

What is a list for?

A sequence of research sheets developed by various members addresses the question: ‘What role a list play in research activity?’

There are orderly lists, such as the shopping list my sister writes, following the layout of the supermarket shelves, and there are messy lists I scribble down to fix in my memory a name or Thought I want to return to for further reflection.

There are lists to refer to well-defined sets and are finite, but there are others that deal with innumerable magnitudes and remain incomplete at the borders of the indefinite. As Umberto Eco masterfully teaches us in *Vertigo of the List* (2009), the list almost always constitutes an initial form of organization and classification. The list allows us to create subgroups, families that share some characteristics but not others.

The organization of such subsets can be simple and one-dimensional, or it can branch out and articulate into multiple levels tasking on more complex configurations.

Operating through a list stimulates us to undertake an initial and fundamental research activity aimed at identifying the criteria to be adopted: the criteria according to which a set of elements stands together and is placed in a particular order. This is not an easy exercise, since criteria, as we know, are always multiple and ever changing, shaped each time by the purpose of the information system itself, a purpose that is inevitably linked to the context, the culture, and the people who design and operate it.

There may be many purposes with which we utilize such lists, but in most cases, we can trace them back to the need to organize objects and information to facilitate their management, retrieval, and exchange. And isn't the production and exchange of new knowledge one of the main purposes of Cumulus? Isn't the purpose of ReVeDA to learn about the research of different Cumulus members, to identify their specificities, and to facilitate the exchange of accrued knowledge?

What is the purpose of a map?

The publication concludes with a series of maps whose objective is to visualize the research being carried out in art and design. Indeed, maps generally serve to present simplified, understandable, graspable realities; they help us to travel, orient ourselves, and know territories in which we do not feel at home.

As Jorge Luis Borges teaches us in his famous paradox *On Exactitude in Science* (1946), a map cannot and should not faithfully represent reality. It must return a synthesis of it that highlights some elements and leaves others out, and it must offer an interpretive framework that can motivate those choices. Again, as with lists, drawing up a map means identifying multiple and subjective criteria, and adopting them as filters through which to select and order knowledge.

The outcome of this volume, which combines lists of research and explanatory maps – perspective and zenithal view -, is an interesting overview about the state of design and arts research in the world. But it is at the same time an ambitious research exercise aimed at reading this universe of activity in a clear and original way. It is, in short, a valuable work that, I hope, can be repeated in highlighting new areas, new frontiers, and new approaches and achievements in the field of design and arts. It is about moving from a snapshot on the state of the art to a time lapse; from episodocity to periodicity.

It is this hope that I wish ReVeDA a great future!

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PART II

ReVeDA: an investigation of research by art, design and media in Cumulus Association

Marta Laureti
Sapienza University of Rome

Preface

The following paragraphs describe the way we traced during our research activity. Some aspects were defined since the beginning others occurred during the practice, but in the end, they all contributed to defining the ReVeDA research methodology. “ReVeDA – An investigation of the research by art, design and media in Cumulus Association” has considered the aspect of methods/approaches of the research not only concerning its specific topic of investigation but also about their proper activity. Most of the time, the process becomes transparent and visible almost at the end of the research. This aspect is more and more relevant in research by art and design, where practice often leads to theory. In addition, another component led us to look at the method as a flexible activity: the presence of intuition as an instrument of research. Consider intuition part of every research activity, where intuition means the rational faculty to make connections. Two different things occur: the first one is that considering the subject of research, no method is equal to another. The second is that the method is something we build along the path. From its etymological meaning, ‘mèta + ódos’ = move towards a way; the word ‘method’ does not look like a fixed list of prescriptions. Differently, the term ‘method’ seems to describe an action, a way of doing research. Therefore, there are different ways of researching, as there are various methods. Far from a method like a list of restraints, the method has been a territory of experimentation, especially in ReVeDA’s research activity. This contribution aims to recognize the things that occur during our research to highlight the method or, better, the way we have followed.

Project description: scopes, methodologies, phases and expected results

The project “ReVeDA- An investigation of the research by art, design and media in Cumulus Association” was born in 2018 as Cumulus Working Group (CWG). The purpose of the CWG was to draw a comprehensive map of research by art and design, defining its fields of interest, the results of its activities, the approaches, tools, and methodologies, but also its actors and the complex networks that emerge. The mapping activity aimed at investigating all these aspects, starting with establishing a privileged observatory on research by art and design

within the Cumulus association. Therefore, Cumulus, with its multi-cultural and variegated reality, has been, from the outset, the perimeter for the research and the figures addressing the ReVeDA activities. Since the beginning, the limits of the investigation have been clear. Even though the perimeter of the Cumulus association is varied and extensive, the mapping activity is an operation limited to a specific temporal space and context. It thus can only exhaust some of the investigation fields.

In addition, a field like research is something that will constantly be updated. The recognition of these limits has strongly influenced the way of doing and proceeding with the research. The project must face the impossibility of an exhaustive and unchangeable description. The awareness of this fragility has also directed the choices of the research process and opened up the question about the best way to represent the research in art and design. A common language, a sort of alphabet easily understandable, was one of the urgencies directing the work. The research approach followed a listing method; each research was collected to reach a unique description underlining the principal features of the research by art and design and media in Cumulus. The mapping activity, albeit within the last-mentioned limits, allowed us to formulate a series of questions and to use an infographic to bring out a new research scenario. On a methodological level, the research formulates theories and hypotheses starting from the phenomenological analysis of reality. Therefore, following the methodology of project grounded theory (1967), we can extrapolate reflections on the subject matter starting from observing the data collected. In this sense, the visual component of the project, from the collection, reading and interpretation of data, was fundamental within the mapping process. The research project combines a mixed quantitative and qualitative method using the survey methodology as data collection and defining infographic maps to analyze the result. The survey methodology typically uses questionnaires or structured interviews as data collection tools to generalize trends. For ReVeDA, we choose to use the instrument of the questionnaire for data collection. To this end, we can identify in the mapping activity three main phases [Figure 1]. The first one concerns the definition of the mapping project (“ReVeDA-Research vectors by art and design and media in Cumulus association”), the

second phase is dedicated to the construction of the instrument of research: the questionnaire and then the third and last phase focuses on the design of an elemental infographic for the analysis of the results. The Cumulus association was chosen for the first phase because of the large number of international participants and because it represents a virtuous platform for cultural exchange. The second phase of the mapping activity involves the design of the research questionnaire as an operational survey tool capable of collecting and, at the same time, returning the main descriptive features of the individual survey participants. Regarding the expected results from the mapping activity, the research hopes to return clarifications, knowledge, methods, and tools about the complex field of research by art and design. Specifically, although the expected results are mainly theoretical, the research intends to contribute by developing a questionnaire for data collection and elaborating an infographic for data visualization to formulate some research models for future mapping.

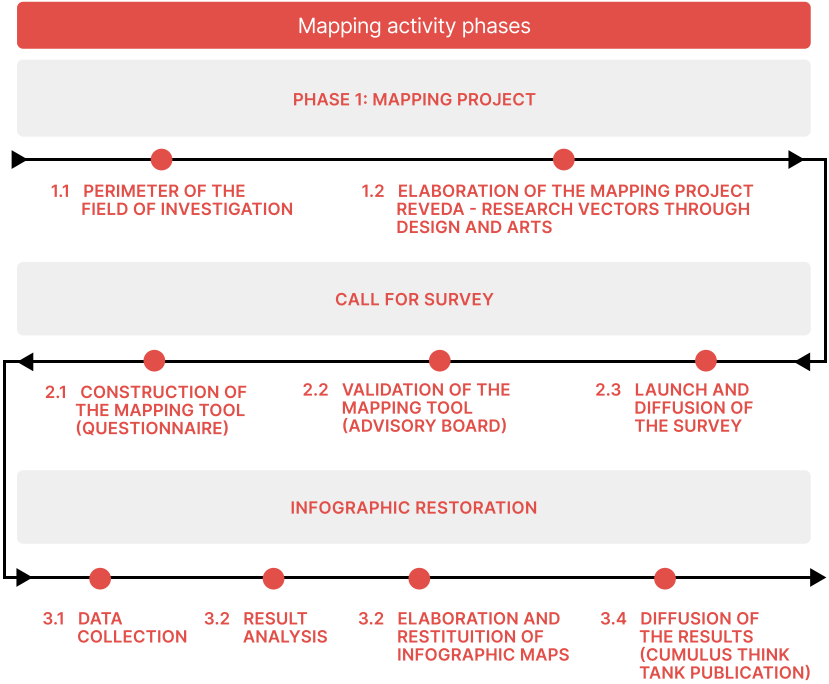


Figure 1 Research activity phases

Operational research tool: the ReVeDa questionnaire

The second phase of the mapping activity was dedicated to constructing the instrument for data collection: the questionnaire. We can distinguish three main phases: [Figure 2]

1. a preliminary phase of conceptual design
2. an intermediate phase of drafting and editing
3. and a final phase of verification and validation before the launch of the questionnaire through the digital platform of the Cumulus association

| Design and dissemination of the research tool | |
|--|--|
| 1. PRELIMINARY PHASE OF THE CONCEPT DESIGN | <ul style="list-style-type: none">• Reference context• Categories to investigate• Cognitive purposes• Detection techniques |
| 1. INTERMEDIATE PHASE OF DRAFTING THE QUESTIONNAIRE | <ul style="list-style-type: none">• Formulation of questions, content, form, order of questions |
| 1. FINAL PHASE OF VERIFICATION AND VALIDATION | <ul style="list-style-type: none">• Construction of the Advisory Board• Meeting (Skype Call)• Transposition of the comments |
| 1. LAUNCH OF THE CALL FOR SURVEY | <ul style="list-style-type: none">• Construction of mailing lists of schools associated with Cumulus• Questionnaire processing on the google models platform• Construction of the publication web page• Launch of the call for survey and dissemination on the official Cumulus website |

Figure 2 Questionnaire phases

Three aspects were defined during the preliminary phase: the context of the investigation, the principal features of the actual research by art and design, and the survey methodology. The intermediate phase is concerned with formulating the questions in terms of content and form. Concerning the structure, the ReVeDA questionnaire is organized into two parts: an introductory part describing the mapping project and a second part dedicated to collecting the research data. The introduction is articulated in a brief description of the aims and objectives of the ReVeDA project, and a field dedicated to the personal contacts of the participants in the questionnaire. The second part of the questionnaire, the research data section, is organized into three sections: the research data (title, keywords, authors, period of the research), the abstract (a brief description of the research that explains its primary purposes, actions, objectives), and the multiple-choice questions. The selected questionnaire model is a checklist where the subject must choose among the proposed items, marking those that he believes now best characterize his research for that given aspect. The checklist questionnaire ensures a variety of responses and, at the same time, a more accessible and scientific collection and cataloguing of data. The formulation of multiple-choice questions allows greater flexibility in the answers compared to single-answer questions and, simultaneously, greater objectivity in reading the results compared to an open questionnaire. The checklist section is modelled on analyzing the main features of research by art and design. A total of seven multiple-choice questions were identified: the research fields, the partners involved, type of financing, type of research, categories of research, type of results and type of dissemination. These seven descriptive categories of research by art, design and media provided the structure to articulate the corresponding infographic maps. As anticipated, the first phase of design is followed by the second phase of verification and validation of the questionnaire. An international committee of experts, established as an advisory board, was set up among Cumulus member schools to validate and test the survey instrument before its dissemination through the digital platform. An initial draft of the questionnaire was shared with the Advisory Boards through a Skype Call meeting. The comments mainly concerned: the possibility of submitting more than one research project (no. 10 max) per Cumulus-affiliated school, the suggestion to expand the description of the ReVeDA

mapping project in the initial part of the questionnaire, the inclusion in the research database of the entry 'affiliation' to immediately identify the origin of the research and finally the inclusion of the 'types of funding', those from doctoral or post-doctoral research grants. Once the operational questionnaire tool was validated, the final phase of the survey was developed. The final phase involved launching the Call for the survey through the official Cumulus advertising channel and personal invitations to individual affiliated researchers by constructing a mailing list. The Call for Survey was launched in July 2018; the questionnaire was then available online using the Google Models platform in the first phase from July 2018 to October 2018 (1st Call for Survey) and in the second phase from June 2019 to August 2019 (2nd Call for Survey). Out of a mailing list of 760 different institutional members, 69 researchers responded to the first phase of the Call for Survey, to which nine more were added during the second and final phase, for a total of 78 participating subjects. Due to the missing or incomplete information submitted, 70 research were considered for the mapping analysis. Therefore, the mapping activity had an international character related to the nature of the association and collected 70 types of research by art, design, and media from 32 schools belonging to 22 countries in the world. Nearly 70% of the research came from Europe, and the remaining 30%, came from Asia, Africa, and South America, with just one research from the United States and Australia. At the end of the Call for Survey, we proceeded to construct a repository: a systematic collection of data to draw a first balance of the quantitative results of the mapping. From this stage, the hand drawing component was essential for developing infographic maps. In addition, due to the quantitative possibility of controlling/managing the data, a manual count was carried out by accumulating essential elements, such as signs, lines, and circles, almost with the same procedure as an abacus. This process of compiling data has inspired and addressed the development of the related infographic language. Although the research generally follows an inductive method, in the first phase, we privileged the use, through the instrument of the survey, of a deductive/classificatory method. The second phase concerned the construction of a research questionnaire, as described above, as a matrix for reading and collecting the data. Therefore, the analysis moved from the first empirical phase of quantitative research relating

to the collection and counting of data to the translation of data into information regarding the themes that characterize research by art and design. The first quantitative results of the Call for Survey highlighted the presence of university and doctoral research; specifically, the doctoral or post-doctoral research participating in the survey amounted to 20% of the total, while the remaining 80% involved research in the university field. The ReVeDA survey shows that 90% of the research collected was multidisciplinary; in particular, significant areas of interest were found in product, education, theory and history, social innovation, and visual arts. Nonetheless, the most interesting data concern the research approaches; the survey showed a substantial majority of ‘research through design’ and a high percentage of ‘applied research’. After this second phase of mapping, related to data collection and reading through the Call for Survey tool, the first results were shared during the Cumulus conference in Wuxi, China, on October 31, 2018. The collection of quantitative data was the prerequisite for initiating a qualitative analysis of the results obtained, but more importantly, as anticipated, for the development of the infographic project. The data had a fundamental aspect in the theoretical construction of the research results. Reading these outputs transforms simple numerical data into information; the subsequent formulation of links between the collected information made it possible to acquire knowledge about the contingency of the analyzed research context. In this sense, the infographic project and the questionnaire constituted a fundamental instrument for creating connections capable of transforming the information obtained from the data into new knowledge about the research. Drawing precedes language and writing; almost from ancient times, humans have sought to synthesize the information they considered most relevant quickly and immediately through the introduction of symbols or the choice of a narrative representation. Maps can create visible connections while simultaneously offering different levels of reading. Because of their capacity for synthesis, the use of maps facilitates understanding the complexity of the reality around us and the problem to be addressed. Maps are thus helpful for detecting the complexity of levels and, more importantly, the changes that occur. In this sense, they represent something that successfully describes realities in a changing scenario, as our field of investigation requires.

Data visualization: the ReVeDA Infographic

The use of infographics for ReVeDA was made possible by translating the results of the individual research to give a single image for each of them and, at the same time, offer an overview of the different aspects of the current research by art, design, and media in the Cumulus association. Therefore, the ReVeDA design of the infographics covered mainly two levels: the collection of 70 maps for the individual researchers participating in the survey and the second one related to the summary maps. Nowadays, infographic is widely used in data communication (Information Design, User Experience Design) and informative/scientific narration. However, given the nature of the research project, it was necessary to rethink and then design an infographic that would first and foremost perform the task of returning complex and abstract data, such as the topic of research by art and design. The infographic project started by considering how to visualize theoretical and abstract data. The concept developed from the desire to construct a visual alphabet made of elementary shapes and colours, capable of identifying the different aspects of design research, making them simpler, straightforward, and more accessible. Hence the decision to return to a primordial form of synthetic representation. The maps were built with elementary abstract shapes such as lines, circles, squares and triangles, differentiated only by colour [Figure 3]. Thus, for example, the line element was used to identify research sectors that change according to colour. Similarly, the colour attribution was chosen according to the subgroups of families of different research sectors. The circle element was attributed to the category of ‘involved partners’, distinguished with different attributes (a dot, a slash, a circle) and according to the geographical type of collaboration (local, national, international); the types of funding, to cite another example, were identified with different geometric shapes (square, circle, triangle, etc.). All these, in some way, ‘primitive’/‘elementary’ elements formed a kind of alphabet to construct the different research frameworks. The constitution of a research vocabulary made it possible to translate the answers of the individual research participants into infographics. Each research shares the same aspects as the other and, at the same time, constitutes a “unicum” in its composition and relationship between the parts.

1. Research Fields



Visual Art
Service
Product
Education
Theory & History

2. Partners Involved



3. Type of financing



4. Type of research



5. Christopher Frayling's categories



6. Results



7. Dissemination



Figure 3 Maps symbols

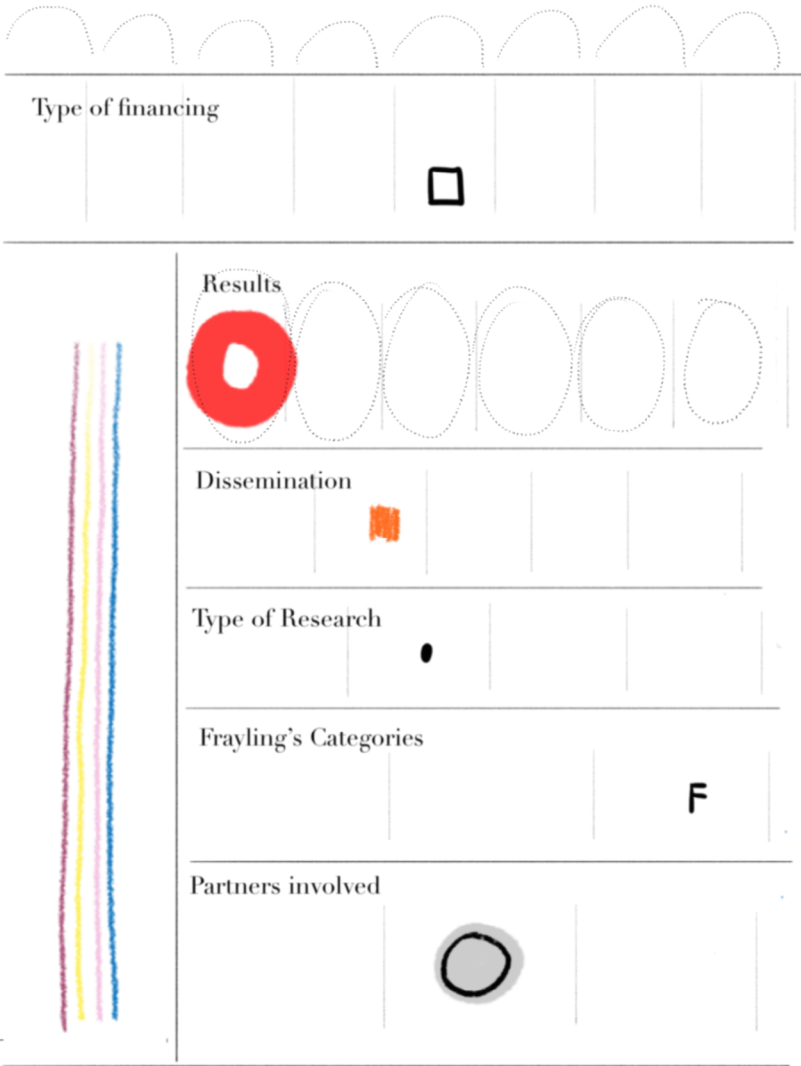
The image of the infographic representation of the individual research visually translates this double aspect: the belonging and, therefore, the recognizability of the individual research to the same family and, at the same time, the differences and specificities that make each research different from the other. There was also another non-negligible factor related to the process implemented for the research, which influenced the choice of the infographic: the project is intimately linked to the methods of data collection and synthesis. At the end of the Call for Survey phase, approaching the next phase of data collection, the choice to proceed to manual counting, consisting of the accumulation of signs representative of the individual characters in the research, played a key role. This process carried out almost instinctively took on a more profound significance for understanding the data collected. The tool of counting using the abacus was extended almost instinctively to the subsequent first graphic elaboration of hand-drawn maps. From the first data management phase to the processing and drafting of the infographic maps, the choice of manual drawing was therefore motivated more by design choices than aesthetic reasons. Unlike using data through software, manual drawing allowed a deeper understanding of the research scenario. Furthermore, it allowed for the humanization of the data in terms of the prevailing aspects of the research through art, design, and media. The main design phases of the infographic maps can be summarized as follows:

- conception of a project concept starting from a reflection on the nature of the object of representation, i.e. art and design research.
- construction of a visual vocabulary of the research (i.e. a research abacus) through the attribution of signs to the different contents of the questionnaire.
- finally, the construction of a grid (a research matrix) as a compositional layout for the individual research data.

From the beginning, with the design of the ReVeDA infographic, the intention was to return a standard but, at the same time, unique image of all the researchers participating in the Call for Survey. Initially, it was planned to ask the participating researchers themselves to represent it in the questionnaire; then, having assessed the objective diffi-

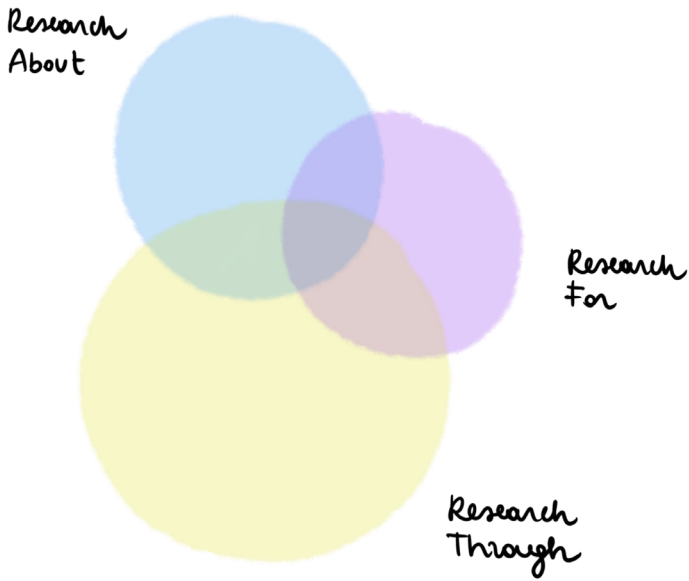
culties that could have rendered the result biased, it was decided to ask them to enclose an image that would in some way describe the research in progress. However, the infographic's design was partly fueled by this initial desire to compare the mapping and individual research results visually. Therefore, the primary survey responses were translated using colour and the association of primary symbols, explicitly assigned to the seven main descriptive categories of research by art and design: fields of research, partners involved, types of funding, results, dissemination, type of research and research categories. These symbols were then used to compose the different research frameworks, thus visually translating the individual answers given to the questionnaire. A layout was designed to allow the collection of the variables given by the different responses and to include multiple answers for specific fields, to have a standardized compositional matrix to identify the fields related to the different research categories. The compositional layout is evenly divided into seven fields, each assigned to a defining aspect of the research, which is articulated into different answers [Figure 4]. The result is an abstract composition of the research image, which concretely translates the individual research answers and, at the same time, attempts to metaphorically express the often-hidden language behind each one of them. Letting the drawing somehow speak alongside the typical detailed scientific descriptions of the research is motivated by the desire to experiment with another communicative territory, in which abstract and meaningless symbols condense part of the DNA that characterizes the research. The operation's aim, albeit within the limits of the necessary synthesis, was to return in a more direct and immediate manner the main descriptive features of the individual research studies to enable easier comparison and reflection on them. Once the individual research maps had been drawn up, it was necessary to establish a classification criterion that was not only a collection tool but also a key to understanding the entire mapping. It was thus decided to look at the research through a lens that could help answer the initial question of which methods/approaches prevail in current design research. Since the analysis of state of art revealed, on the one hand, the failure of the historical path of searching for a scientifically repeatable method and, on the other hand, the aptitude of design to make its methods applicable to other disciplines as well, often reinventing them, the initial interest in meth-


Figure 4 Maps layout





ods, as already mentioned, was reviewed, and reformulated within the broader concept of research approaches. Therefore, the classification criterion led to collecting research based on the well-known categories attributed to Christopher Frayling (1993-'94): 'research about art and design', 'research through art and design' and 'research for arts and design'. The motivation for this choice lies mainly in the fact that, although Frayling's (1993-'94) classifications are still subject to much criticism and misunderstanding today, they would nevertheless provide, in their description of design as action/process, the epistemological concepts for the development of a genuine research paradigm (Jonas, 2007; 2012). Nowadays, 'research through', a research approach in which the discipline becomes the medium of research, embodies the current aspect of art and design research. The three primary subtractive colours (cyan, magenta, and yellow) were chosen to translate Christopher Frayling's three categories visually. The colour overlays [Figure 5] offered at the same time the possibility of identifying the overlaps of one or more categories carried out within the same research (e.g. 'research on + research through' etc.).




Figure 5 Classification criteria



 = About (15)

 = Through (32)

 = For (6)

 = T+F (11),  = A+T+F (6),  = A+T (3)

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Mapping Cumulus

*An attempt to visualize the
research by art and design*

Geography of the research

| | |
|---------------------|--|
| Australia | University of technology Sydney |
| Brasil | Pontifical Catholic University of Rio de Janeiro |
| China | The University of Hong Kong |
| Cile | University of Desarrollo |
| Finland | Aalto University |
| France | Strate School of Design School of Design Nantes Atlantique |
| Germany | Hamburg University of Applied Sciences |
| Greece | University of West Attica |
| Indonesia | National Institute of Technology |
| Israel | The College of Management Academic Studies Hadassah Academic College |
| Italy | University of Bologna University of Studies of San Marino Sapienza University of Rome Politecnico di Milano |
| Ireland | Dublin Institute of Technology Technological University Dublin |
| Malesia | Technological University Mara |
| Netherlands | Amsterdam University of Applied Sciences |
| Nigeria | University of Port Harcourt |
| Pakistan | Pakistan Institute of Fashion and Design |
| Philippines | University of Santo Tomas |
| Serbia | University of Belgrade |
| South Africa | Cape Peninsula University of Technology University of Johannesburg |
| Spain | LABA Valencia – School of Art & Design School of Art and Design of the Balearic Islands Zaragoza School of Design Madrid School of Design |
| Sweden | Stockholm University of Arts, Crafts & Design Umeå Institute of Design |
| USA | University of Michigan |

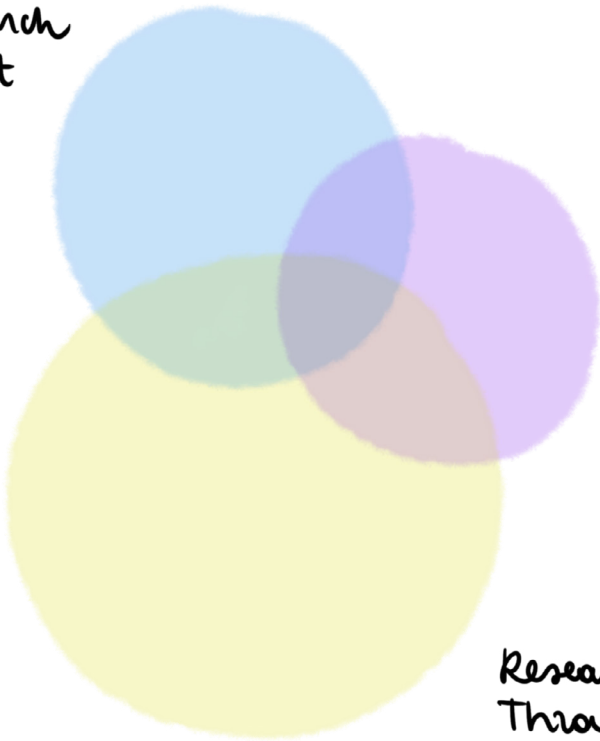
Interactive map






Classification criteria


Research
About







Research
For

Research
Through

 = About (15)

 = Through (32)

 = For (6)

 = T+F (11),  = A+T+F (6),  = A+T (3)

A

Research About Design

The time that design students spend on in and out of class learning activities at a higher education institution in Cape Town

Keywords: actual hours, student workload, design students

Period: 2013-2018

Student workload is measured by the time taken to complete all learning activities. This variable is significant in the curriculum for ensuring quality teaching and learning in higher education. In the reviewed literature, student workload is viewed as objective workload (notional hours), the estimated hours worked or actual hours reported over a period of time. In higher education, notional hours are applied to all subject fields uniformly, without considering the relationship of time allocated to in- and out-of-class learning activities in the various fields. Time spent on these learning activities for the purposes of workload calculations focusses on text-based learning activities. Design students' workload and the time spent on drawing related activities has not previously been considered. The workload of Interior Design students was determined through the completion of a timesheet diary. The entries focused on the time spent on learning activities, and the ratio between text based and drawing based activities. The resulting discussions concentrated on the comparability of students' workload to the expected notional hours and grades. It was determined that the time reported for text-based subjects align with the notional hours and timetabled hours. Whereas, drawing-related subjects, was allocated more timetable hours, which does not align with prescribed notional hours, due to project-based learning and individual critiques with lecturers. The allocated contact time (28hrs) per week appeared high in comparison to the notional hours. However, the student's individual contact time in-class (14hrs 54min) aligned with the notional hours and text based learning activities. Further analysis revealed that the contact time should be reconsidered as the average workload per week exceeds the weekly notional (40) hours. An alternate provision within workload calculations should be considered for drawing related fields as those students exceeding the notional hours were more likely to meet the grades and learning outcomes.

Carike Abrahamse

abrahamsec@cput.ac.za

/
no financing



method tools



paper



Basic Research

A

Research about Design



Education

Local Partners

Diskarte: understanding design culture through the works of Filipino design exemplars

Keywords: design culture, creativity, Filipino exemplar designers

Period: 2018-2020

The dearth of local scholarship on everyday objects as chairs is indicative of society's attitude towards popular culture. This study aims to attenuate the condition by articulating a theory of Philippine design culture focusing on the chair as based on selected works by artisans and designers from the twentieth century. It takes as a frame the concept of creative ingenuity or diskarte - a term that surfaces during the course of the investigation that seems to underlie the culture. The theoretical, conceptual, and operational underpinnings of design culture in the Philippines are explored using the mixed methods of inquiry: how the concept of diskarte is translated by the designers, producers, and consumers of chairs from the case studies. Diskarte as an approach or method explains the responses to the commodification of design that formulates strategies and techniques of local innovations. The economic aspect of the design is a major component in the development and evolution of design culture. Design is a commodity, and the kind of market where it operates necessitates corresponding levels and modes of creative ingenuity. The representations of Filipino chairs, from the syncretic, artisanal and the ethnic revivalist traditions, tend to be globally-focused but remain Philippine-oriented in the inclusion of local elements. The multicultural design sources and indigenous origins show the dynamism of design culture despite being intrinsically bound by tradition. Philippine design culture may be deemed to be commonsensical, constantly adapting strategic responses to the constantly emerging predicaments and drawing strength from the flexibility of its human resources. This quotidian study has evaluated Philippine design culture: how it has developed through time through the examples of the chair.

**Guillerma Mendoza, Nady Nacario,
Lilia de Jesus, Mary Grace Hernandez**
gemma.lmendoza@gmail.com



National financing



method



project



product



book



paper



conference



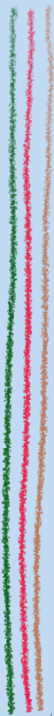
exhibition



Artistic Research

A

Research about design



others

product

Theory

History



National Partners

Hidden curriculum and invisible pedagogies in the Art and Design Schools

Keywords: invisible pedagogies, hidden curriculum, artistic education

Period: 2018-2019

Research is one of the decisive and fundamental tasks for higher education teaching staff in design to provide quality, up-to-date and pioneering training in the specific fields of their knowledge.. One of the specialities taught in our centers is Interior Design, in which students learn to interpret, create and transform spaces with different functions and uses, based on conditioning factors and antecedents, sometimes with very strict criteria, either due to tradition or even obsolete regulations that do not always fit in with the way society has developed today, particularly in the design of educational spaces. Education must evolve to adapt to the twenty- first century, for this it is essential to discover and analyze the invisible pedagogies in the schools of Art and Design. As the spanish researcher Acaso M^a and Nuere, S. (2005) point out, when we realise that something apparently as insignificant as leaving a door open or closed radically transforms what happens in the classroom, it is that invisible pedagogies have begun to be a consubstantial part of the teaching experience. Our research will focus on the detection, analysis, repercussion and proposals for improvement of invisible pedagogies fundamentally related to the design of educational spaces and environments. We incorporate as a variable especially to take into account gender perspective as a transversal category in research.

Nancy Canos Rius, Carmen Sevilla Madrid,

Mirentxu Sardina Ruiz

msardina@easdcastello.org

/
No financing



project



paper conference



Basic Research

A

Research about
design

Others
Social Innovation
Education



National partners

Design Thinking & Design-driven Innovation

Keywords: innovation frameworks, innovation cultures, innovation platforms

Period: 2018-2019

This research investigates design thinking as managerial innovation. It analyses its diffusion throughout organizations, the adoption and adaptation of practices, and the impacts of Design Thinking on in-house designers. Field research is based on a multi-case study of five large French companies. The results show that the strategic purpose of using DT for innovation or for transformation influences how its introduction is managed in companies. Contextual factors (cultural, technical and political) are more important to understand the adaptation of practices and their diffusion throughout organizations. The research also shows that adopting DT, whatever the initial strategic goal, has a positive impact on in-house design functions. Depending on the organizational context, designers may be recognized as specialists, as key actors in multidisciplinary team, and/or as the most suited function to lead innovation processes. The implications of these findings invite managers to adopt a multilevel perspective to pilot DT initiatives in organizations. Both the strategic and organizational dimensions shall be taken into account, to fine-tune the diffusion of practices and the magnitude of their adoption.

Estelle Berger

e.berger@strate.design

No financing



paper conference

Applied
Research

A

Research about
design

Others
fields



National partners

Furthering the foundation studies model in Art and Design Higher Education in Pakistan

Keywords: foundations in art and design, art and design education

Period: 2017- ongoing

Arts foundation programs are crucial in Pakistan primarily due to the great breadth of cultural and academic diversity of students entering art and design professional education. This study seeks to collect and analyze, primarily, qualitative data about the highly varied curricular and pedagogical cultures and circumstances of education in arts foundations across Pakistan. These contexts vary greatly in terms of resources, aesthetic preferences, curriculum ideologies, geography and language. At institutes of art and design, foundation programs are typically considered as a service discipline for their undergraduate specialization areas. However, the foundation year, like its initial historical precedents in the West, such as the Bauhaus, can offer much more. Most importantly they can offer intensely holistic learning experiences that go beyond preparing students for their post-foundation disciplines and prepare creative citizens for a more sustainable and responsible professional practice. Given Pakistan's, as well as the global ecological and political realities today, this is crucial. Foundation year being the entry point for students to art and design professions, as its main premise, this study aims to shed light on this important threshold of entering professional training for the creative industries, in order to advocate for strengthening them in Pakistan. Data from 14 higher education institutes across the country has been collected through interviews of foundation faculty, on-site observations of foundation studio classes, and a baseline survey on institutional infrastructure and curricular mission. It is hoped that through its findings this study will create a case for evidence-based curricular policy and infrastructural support wherever it might be required, to sustain foundation programs in Pakistan. This research project is the first funded study on curriculum and teaching in Art and Design higher education in Pakistan and is supported through a Higher Education Commission (HEC) research grant.

Dr. Razia I. Sadik, Umar Hameed

risadik@gmail.com



National financing



method + tool project product



paper



conference



workshop



Basic Research

A

Research about design

Others fields

Visual Art

Territory and local production

Product

Education

Theory & History



National partners

Design in the Mediterranean Area

Keywords: development, mediterranean area, middle east

Period: 2019 - 2022

The research aims to investigate the design positioning across countries of the Mediterranean area, focusing especially on those realities less known for their design activities in Europe like the south and south-east side of the Mediterranean, including the Arab peninsula. The area of interest contains the following states: Morocco, Algeria, Tunisia, Libya, Egypt, Jordan, Saudi Arabia, Oman, UAE, Qatar, Bahrain, Iraq, Iran, Lebanon, Turkey and the Balkan countries. Considering the geographical proximity and cultural link, Cyprus, Sudan and Ethiopia could be added. Topics to be taken in considerations: 1) Events - Events and strategies to promote design as a tool for industry, design weeks are an important moment in several countries around the Mediterranean Sea. Creative companies and designers from various disciplines gather to explore, exchange and network. Some Design Weeks propose specific themes for each edition (e.g. Beirut), others are "general" (e.g. Dubai). All are concerned with promoting the various aspects in which design plays an important role for creative industry culture and for specific craftsmanship, which is looking for new sources of inspiration to renew itself and look to an international market. 2) Education - The mapping of the Mediterranean design schools gives the opportunity to evaluate the excellence, which have been created in different countries. Industrial excellences that cooperate with creative schools, the desire for collaborations puts that knowledge to their advantage. Many relations will be an opportunity to create triangle workshop cooperation on topics of strong interest such as craft knowledge, creative industries, emerging economies. Perceiving the Mediterranean area as a unique and uniform economical area, the design network will be one of the driving motors for its success.

Andreas Sicklinger, Guglielmo Ori, Riccardo Varini

andreas.sicklinger@unibo.it

/
no financing



tool



book



conference



Basic Research

A

Research about design

Visual Art

Territory & local production

Social Innovation

Communication

Service

Product

Educational



International
partners

Madam Mercy Alagoa's textile collection as visual documentation of nembe cultural

Keywords: Mercy Alagoa, textile, visual documentation, cultural heritage

Period: 2018-2020

Textiles are material culture and serve also as visual resource that complement the heritage of a people. Many Nembe people preserve cloths in boxes only to be used when there is an important event/s. On her part, Madam Mercy Alagoa had focused her textile collection on the educative, social, cultural, economic and moral importance of clothes. This idea led her to collect a huge body of textile materials, which this project seeks to documents in a photo book for researchers. Regarded as a "textile icon", she can be likened to "an encyclopedia or a Textile historian, as well as a lecturer in Nembe cultural History." During her life time, she collected box loads of textiles, preserving them according to types, designs and period. Such arrangement distinguished her collection from those organized by local people. This research is aimed at sorting and documenting the Textile collection of Madam Mercy Alagoa, as visual preservation of Nembe cultural heritage. Areas to be looked at include.

Professor E. J. Alagoa and Dr. Pamela Cyril-Egware

pamekballoons@gmail.com



Private financing



project product



book



exhibition



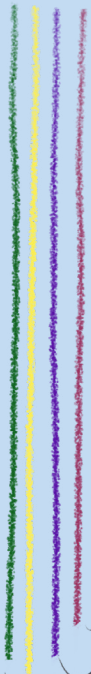
Artistic Research

A

Research about design



local partners



Visual Art

Fashion

Communication

Theory & History

Paradigm shift in design praxis

Keywords: paradigm shift, modern design history, innovation, tacit knowledge, praxeology.

Period: 2017-2019

The objective of the research denies historical formalization that it scarcely can be distinguished from the descriptive proliferation. It bases on Michael Polanyi's philosophy of tacit knowledge's importance, which points out that practical wisdom is more truly embodied in action than expressed in the rules of action. Hence, a contradiction between tradition and transcendence seems to be fundamental to design praxis, and therefore a new perspective has to be laid on it, via researching the experienced by experience. If design historians incorporated in their works Thomas Kuhn's approach about the revolutionary terms that have changed the progress of the science of physics in general, so, any prominent form of design activity could be possible to be brought to a practical, dialectic plane, with meanings more closely relating to experiences of giving form and structure to useful things, than to external causes of morphological signification as a matter of historical justification. A utilization of similarities and differences between all prominent cases of modern designers and their work in action force us to reformulate the questions that were aroused and the answers that were finally given by the historical subjects of design concerned with how their concept ability and materialization possibilities became related to the unique situation : to shift from traditional design praxis by transcending the ways of thinking and acting in order to come upon a form's originality, both as product of use and prominent object of human progress and culture in general.

Athanasios Kouzelis, Magnus Rönn,

Maria Poli, Charis Ioannou

indesignbureau@gmail.com

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No financing



method tool



book

•
Applied Research

A

Research about
design

Others fields,
Theory & History



International
partners

A systems approach to participatory art in the arts institution

Keywords: socially engaged programmes, models of participation and interaction

Period: 2016-2020

The project emerges in general from the increasing turn towards aspects of collaboration and participation within contemporary art and in particular from the identification of socially engaged programmes as particularly contested areas of the arts institution. The project aims to unpack the organisation of socially engaged programmes, to interrogate their motivations and subsequently to investigate models of participation and interaction developed with the public under these conditions. By utilising a systems theoretical approach in the investigation of participatory projects and their organisation as well as drawing from the history of participatory systems art, this research will view the institution and participatory projects as embodying complex interactions between social systems. The language of general systems theory provides critical criteria for the analysis such work and promotes reconsideration of how institutions and their programmes may be re-conceived as flexible and transformative entities within alternative methodologies.

Kieran Corcoran, Grainne Coughlan

kieran.corcoran@dit.ie



Doctoral research



project



book



paper



conference



exhibition



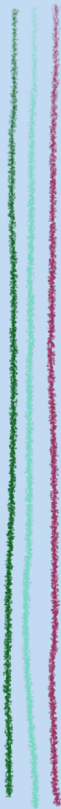
Basic Research

A

Research about design



National partners



Visual Art

Education

Theory & History

T

Research Through Design

Symbiotic tactics

Keywords: design, ecology, symbiosis

Period: 2013-2016

Through the practice of design this postdoctoral research project investigated concrete socio-environmental problems and developed novel registers and methods that can articulate human behaviour and influence decision-making to the complexity of human-nonhuman interactions. Based on my PhD studies (Avila 2012), the project set contemporary discourses in biological and ecological sciences in communication with philosophy and political ecology through the practice of design. Design projects in Argentina (through the Multidisciplinary Institute of Vegetal Biology of Córdoba) and South Africa (through the African Centre for Cities in Cape Town), aimed at searching for ways of opening up the possibility of 'symbiotic tactics,' that is, tactics that through cooperation and/or togetherness reinforce the interdependence between cultural diversity and biological diversity. This 3-year international project related Konstfack (the School of Arts, Crafts, and Design in Stockholm) to two research centres in the global South, published peer-reviewed articles, and developed concrete designs and exhibition material.

Martin Avila

martin.avila@konstfack.se



Post-Doctoral
Research



project



book



paper



conference



exhib.



work



Artistic
Research



Research
through
Design



International
Partners



Sustainability
Social Innovation
Product

Mapping Edges

Keywords: plants, cities, sustainability

Period: 2014 - ongoing

Mapping Edges is a research studio investigating people's relationships to plants in the city. Mapping Edges addresses 'plant blindness', the inability to see and recognize the importance of plants in our environment. This is important because there is a connection between how we look at, perceive and sense our environment and how we relate to it. Our 'research through design' methodology includes experimental and participatory mapping of neighborhoods, ecologies, institutions, spaces and networks. This combines a range of ethnographic methods such as interviews, participatory workshops and archival research with the design principles of permaculture. We consider edges as transition zones between different ecosystems; interfaces between mediums, projects and processes on the margin of activities where it is possible to cross-pollinate, tinker and develop alternatives. By mapping what happens at the edge of cultural processes and practices, where the local grips the global, and the global is grounded in the local, our work investigates everyday acts of environmental stewardship and demonstrates how design practices shape civic life for both humans and non-humans. We have designed a suite of workshops, publications and multispecies experiences including workshops in several Sydney neighborhoods, seed balling, and participatory mapping. These initiatives are designed to open possibilities for designing in cities differently. Mapping Edges was 'Creative in Residence' at UTS Library in 2019. Our work has been published widely in journals of design, visual communication, geography, cultural studies and anthropology.

<http://www.mappingedges.org/>

Alexandra Crosby, Ilaria Vanni

alexandra.crosby@uts.edu.au



Public Financing



method



project



paper



workshop



Basic Research



Research through design

Sustainability

Theory & History



Local Partners



Transformation of traditional rice cooking utensils into modern design in west Java indonesia

Keywords: transformation, traditional craft, lighting design

Period: 2014 - ongoing

Main Goal: to sustain traditional crafts that were once used for cooking rice but then replaced with electric rice cookers. how to transform crafts into components of modern design. Actions: experiment by design table lamp using lamp shade from steamer woven bamboo that used to be part of cooking rice traditional utensil. Result: A prototype of table lamp used lamp shade from steamer woven bamboo. demonstrates the idea that daily traditional craft that have been replaced by modern product can be transformed, as component of modern design. It is can be seen as an effort for sustain an ethnic traditional heritage and a representation of local culture-based design, journals of design, visual communication, geography, cultural studies and anthropology.

<http://www.mappingedges.org/>

Jamaludin

jamal@itenas.ac.id



Private financing



project product service patent



paper



conference



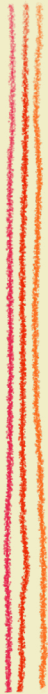
workshop



Clinical Research



Research through design



Sustainable,
Social Innov,
Product



Local Partners

Design and aesthetics of being together

Keywords: design, interaction, aesthetics

Period: 2014 - ongoing

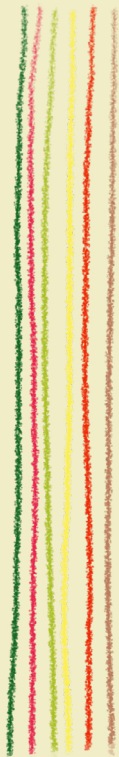
Design deals with matters of aesthetics. Historically, aesthetics in industrial design refers to the designed artifact: aesthetics of objects. When designed artifacts include digital technologies, aesthetics refers to what happens between people and artifacts as well: aesthetics of interaction. This research investigates an aesthetic of being together, as a necessary addition to current notions of aesthetics in interaction design practice, when it engages with digital systems that are part of people's social life. It does not answer the question what Aesthetics is in general, instead it examines the work that particular notions of aesthetics do in interaction design practice. This practice based design research starts from current notions of aesthetics in interaction design to explore the social experiences that mediated interactions between groups of people offer. What I found, through designing digital systems, is that current notions of aesthetics in interaction design are not conducive to addressing the kind of social experience people have with such systems. On the contrary, current notions actually inhibit interaction design to approach any experiences that cannot in the first place be conceived of as useful in terms of instrumental task performance. Yet, being social is hardly like performing a task or using other people in that sense. An aesthetic of being together is a proposition of a different fundament for interaction design practice. In addition to referring to properties of things and qualities of interacting with things, it refers to the kind of relations that come to expression between people interacting with each other with these things. This work contributes to the field of interaction design research an example of how, through practice, fundamental issues can be addressed. By orienting one set of concepts, ways of working and objectives into a different design situation, tensions built up that exposed foundational issues with that frame of reference, while pointing to the different fundaments needed to enable design practice to engage such situations.

Christoffel Kuenen

christoffel.kuenen@umu.se



Doctoral Research



method



project



paper



conference



workshop



Artistic Research

T

Research through design



International part

- Others
- Social Innovation
- Communication
- Service
- Product
- Theory & History

Siesta healthcare furniture

Keywords: healthcare furniture, product design, furniture design

Period: 2016 - 2018

This project was concerned with the development of furniture aimed particularly at the healthcare market. Over the course of 2 years, TU Dublin School of Creative Arts worked with an Irish healthcare furniture manufacturer in order to further develop a product which is now in production and has been sold to approximately 50 hospitals in Ireland and the UK. The challenge of the project was to design a sofa for healthcare environments that could easily convert to a bed, so that a visitor could stay overnight with an ill family member or loved one. The key issue to be resolved was to design a mechanism that was easy and quick to activate by everyone, including people with limited physical abilities, whilst being robust and suitable to high-use environments. The mechanism had to be intuitive and understandable for users and also had to operate within a minimal footprint. In particular it was essential to find ways to ensure that the risk of infection/contamination was limited. The school continues to work with the company in order to develop a larger research area looking at Healthcare Furniture

John Walsh

john.walsh@tudublin.ie



Public financing



product



patent



exhibition



Applied Research



Research through design



National Research



Health Care Product

Metaphoric collage sequence in the architectural design process

Keywords: architectural education, metaphoric collage, design process, visual qualitative research

Period: 2018-2019

The paper presents two diverse case-studies of using 'metaphoric collage' as a complex tool for problem framing and process development. The visual attributes of the 'metaphoric collage' amplify conscious and unconscious personal organizational behavior and allows for definition of various challenges. One case-study is a description and analysis of the use of 'metaphoric collage' in the context of the design studio, in which sequential and multi-contextual 'metaphoric collages' were integrated in various stages of the process. They were conducted in sequence: the first was used to re-frame the design problem and formulate a design assumption (literal), second was used to develop a conceptual visual language (visual), and the third established a spatial concept to be finalized into a design solution (spatial). The second case-study describes the use of 'metaphoric collage' within the framework of a multidisciplinary MA program. The use of the tool invokes 'common-ground' for students of various professional background and experience. The tool supports the understanding of values and perceptions of individuals and connects them to challenges. The challenges become the basis for problem framing and a springboard for research and project development. The tool combines visual findings, story writing, defining a collection of challenges and choosing the most significant one. The analysis methodology combines qualitative and quantitative methods. The analysis and results enabled to formulate new understandings toward methods of using 'metaphoric collages' in various sequences. In the design studio, the emphasis was on the actual implementation of the collage as a unique representation; in the case of the multidisciplinary MA program the emphasis was on the relationship between the professional and the personal in various means. In both cases it assisted creativity and agility, evolution of ideas, constant reflections, translation from the verbal to the visual, discussion, sharing of knowledge, and overall encouraged a much-improved process.

Shoshi Bar-Eli, Amos Bar-Eli, Rivka Hillel-Lavian

bashoshi@colman.ac.il



No financing



method tool



paper



workshop



Applied Research

T

Research through design



Other fields

Education



local partners

Food and the city

Keywords: eating habits, urban design, circuit economy

Period: /

The research examines the global concern of how to feed the planet in 2050 from an urban and interior design perspective. People's eating habits and way of life have a direct and indirect influence on natural resources and on the new phase of the protein transition and minimizing food wastage. Through the exploration of the circuit economy inputs and outputs. Designing new food products and choosing sustainable material for new eating habits influence people's way of life in the city. This research question is explored in relationship to new forms food production and bio-products, distribution and consumption.

Dolly Daou

d.daou@lecolededesign.com



International financing



method



project



product



paper



conference



exhibit.



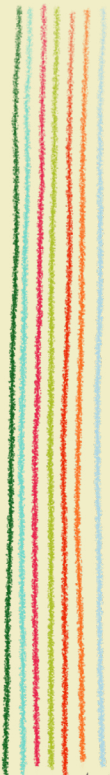
workshop



Applied Research



Research through design



- Nutrition
- Sustainability
- Social Innovation
- service
- product
- Education
- Theory & History



International partners

Participatory data physicalization: designing informative experiences

Keywords: physicalisation, interaction design, visual journalism

Period: 2017-2018

The story of data visualization witnessed some critical changes in the last years. We do not refer to the interactive possibilities provided by digital devices and the quantitative possibilities offered by big data, but to the emerging new field of data physicalization, consisting in "physical artifact[s] whose geometry or material properties encode data" (Jansen et al, 2015). Data become analog, visible and tangible in the public space, opening new design possibilities for new audiences. Interactions give rise in public spaces such as museums, city squares or neighborhoods. Information is then spread through objects in the space. In this way, data physicalization is blurring the boundaries between product, information and exhibit design. Moreover, new forms of interaction are taking place, when data physicalization becomes participatory: visitors turn into participants, contributing actively to the visualization with their data, giving rise to a recursive action in which participants are both the protagonists and the audience of the visualization. Participatory Data Physicalization (PDP) enable a different public engagement if compared to Data- Visualization and -Physicalization. Often entailing the involvement of the entire body, PDP can give way to artifacts that dispose and afford participation toward a broader diffusion and deeper understanding of information. We designed and evaluated a PDP case study that took place in November in Milan during TEDMed 2017, thanks to a funding of KnowAndBe.live. The participatory experience involved the local public, which has been exposed to the cancer prevention issue, a delicate topic that is generally difficult to communicate and to be listened to. Affected and engaged by design, the attendants participated in the PDP and then took part in the qualitative evaluation, where they released important feedback on the experience and their knowledge of the topic. The collected data revealed that the physical interaction supported the participants in focusing on the issue and redirecting on it.

Matteo Moretti, Alvise mattozzi

hello@matteomoretti.com



International financing



tool



paper



conference



workshop



Applied Research



Research through design



National partners

Health Care

Communication

Product

Zero Gravity: design and production of ultralight armachair for civil airplane business class

Keywords: product innovation, materials innovation, lightness

Period: 2016-2019

"0 Gravity" project, want to develop the innovative "0 Gravity" concept, with particular reference to comfort and ergonomics, in relation to the use of innovative materials. Starting from the assumption that the concept of comfort is linked, in the aeronautical field, to the level of safety perceived by the passenger, the research is focused in particular on the assessment of perceptual aspects related to both the use of materials and the perception of physical and psychological comfort. In fact it is scientifically known that, in the definition of perceived well-being, social factors contribute. The concept of wellness in flight, in fact, is related to the perception that each subject has, depending on his culture, race and / or Personal habits.knowledge of the topic. The collected data revealed that the physical interaction supported the participants in focusing on the issue and redecting on it.

Sabrina Lucibello

sabrina.lucibello@uniroma1.it



National financing



product



book



Applied Research

T

Research through
design

Product



local partners

Therapeutic habitats for the treatment of Alzheimer's syndrome

Keywords: dementia, design, habitat

Period: 2017- On going

GRACE_lab is an experimental research lab, born in 2018 from the collaboration between Genera Onlus and the research group LABIRINT, from the Design Dept. of Politecnico di Milano. The main goal of the research lab is to design, prototype and test interior design solutions, devices and tools for the treatment of Alzheimer's Syndrome, thanks to the active presence of an interdisciplinary team composed of researchers, designers, operators and caregivers. Aim of the research activity is the identification of new methods and strategies for the development of environmental devices supporting non-pharmacological therapies for the treatment of Alzheimer's disease. In fact, In the framework of non-pharmacological therapies for Alzheimer's disease, the environment itself performs a therapeutic function, if properly designed to the specific needs of the people living in it. The research aims at theoretically develop, and subsequently prototype, a set of interventions and environmental devices called "Therapeutic Habitat" meant as spatial solutions that increase the well-being of patients and the effectiveness of non-pharmacological therapies, reinforcing cognitive residual abilities of people with dementia. Therapeutic Habitat correspond to certain set of systems which are designed for specific pathologies and possess therapeutic features. Respectively, they are made up of a set of design elements (furnishing systems; multimedia systems; signage systems and intuitive perception of functional areas; scenographic systems of colours, decorations and objects, integrated services), calibrated and chosen according to the specific needs of people with dementia. The research activity is developed in collaboration with the team of therapists employed in the day-care center Grace in Figino, Milano.

Silvia Maria Gramegna

silviamaria.gramegna@polimi.it



Post-Doctoral
Research



project



product



patent



book



paper



Applied Research



Research through
design



National partners

Health Care

Methodologies of social innovation for transdisciplinary and collaborative design learning (MATC-design)

Keywords: project-based learning, social innovation, Co-Design

Period: 2017- 2020

In September 2017, the GRID-EASDIB GOIB Research Group on Innovation and Design was formed and opted for a regional call for proposals with the project "Methodology of social innovation for transdisciplinary and collaborative design learning (MATC-design)". This was an academic research project aimed at ideating, executing, communicating and evaluating a transdisciplinary co-design project with BA in Design students. The main objectives were to introduce Social Innovation through Design, promote a design with a meaning (Social Design, Sustainable Design, and Design for All), and improve students' key professional competences, in line with the Horizon 2020 Program (facing social challenges). According to FRAYLING's categories (1993), EASDIB researchers used the instruments of Design for doing Research. In this context, during 2017-18 and 2018-19 BA in Product Design students participated in "The Co-Upcycling Workshop" design Project, in cooperation with ECOEMBES, Fundación Deixalles and IES Politècnic. The main objective of this activity was to introduce sustainability issues into the design process. During 2019-20, BA in Fashion Design students developed the "Museum and Inclusive Fashion", in cooperation with Museum-Foundation "Juan March in Palma", ASPAYM Illes Balears and PREDIF Illes Balears. The main objective of this activity was to introduce Design for All issues into the design process. These activities were part of an ongoing academic research project funded by the Balearic Government (2017-2020). This abstract reflects the views only of the authors, and the Balearic Government cannot be held responsible for any use which may be made of the information contained therein.

**M. Pilar Rovira Serrano, Irene Mestre Massot,
Maria F. Abando Olanar, Margalida Canet Oliver,
Francisca M. Torrens Barcelo, Mar Vilata Juvanteny**
silviamaaria.gramegna@polimi.it



Public financing



method tool



paper



exhibition



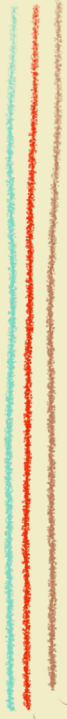
workshop



Applied Research



Research through design



Others fields

Social
Innov.

Education



Local partners

Education in social design - design through artistic photography

Keywords: transformation, traditional craft, lighting design

Period: 2018

This research proposal addresses the importance of Inclusive Education in Social Design by means of Artistic Photography as a tool for social change. We propose an Action-Research model through analysis and reflection on several teaching experiences on Social Design at the Superior School of Design in Aragón (ESDA). This research involves the design, intervention and evaluation on these creative processes, based on Artistic Photography workshops. In my teaching experience, I have observed that the most effective workshops are the ones that fulfill three requirements. They must be participative, developed at a peer to peer level and with face-to-face contact among students and the vulnerable group. From 2017 to date, we have worked with intellectually disabled, people suffering from mental health problems and, by now, immigrant mothers from different cultures than ours. The objective of this research is to demonstrate that these inclusive educational practices in Social Design by means of photography can produce a change of attitudes in design students. Specifically, we want to evidence (if so) that they become aware of that they have the necessary tools to contribute to social change achievement. Our intents go in this direction: On the one hand, we want to provide a theoretical framework based on a conceptual delimitation. It would start from defining the ontology of Social Design and the particularities of Photography as an especially useful tool to these ends. On the other hand, the empirical framework we are interested in working with is based on an Anthropology research methodology. It is called PHOTOVOICE (Wang y Burris, 1997) and consists of an inside observation in which everybody in the vulnerable group takes pictures to document their everyday life and needs. Finally, this work aims to be a little contribution to the UN 2030 Agenda for Sustainable Development. Specifically, to its goal number 4.7, about the need of improving Education Quality.

Cecilia Casas, Jose Chavez, Rebeca Bazán

ccasas@esda.es



Public financing



project



service



paper



Applied Research



Research through design



local partners

Social
Innovat.
Education

F

Research For Design

Interface design roles at museum experience as a modern survival in IR4.0

Keywords: interface design, interactive storytelling, interaction design, cultural heritage, museum studies, museum experience studies

Period: 2018/2019

This proposed research is initiate an industry-wide discussion in the field of Interface Design related to Museum Experience Studies, notably focusing on how the use of modern technology in IR4.0 such as Interaction Design, Interactive Storytelling and Artificial Intelligence that may fundamentally change visual and multimedia communication in museums. The aim of this research is to study an integration between the information artefacts that carry through the presentation (interface design) and the visitor experience and—examining how modern computing technologies can be used as a medium to integrate storytelling experiences. The study will be experimenting and analysing by using technological approaches such as Augmented/Virtual Reality, Internet of Things, Interactive Storytelling, and Smart Assistants throughout the whole design process. The study will be covering a few aspects of findings including i) the brand identity of the museum in the digital age, ii) an immersive storytelling experience for visitors inside the museum, and iii) a social communication after the visit that promoting the visitor experience. Moreover, the study highly significance both, museum and academia in term of proposing a new method of presentation on artefacts toward IR4.0 in Malaysia.

Creative Visual exchnge group

norfadilah@salam.uitm.edu.my



no financing



method



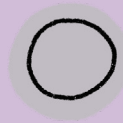
paper



Applied Research

F

Research for Design



National Partners



Visual Art
Communication

The school grows a self-construction project at E/S/D/Madrid

Keywords: collective and collaborative practices, innovation, self-construction

Period: 2014 - 2017

This research proposal addresses the importance of Inclusive Education in Social Design by means of Artistic Photography as a tool for social change. We propose an Action-Research model through analysis and reflection on several teaching experiences on Social Design at the Superior School of Design in Aragón (ESDvvis direction: On the one hand, we want to provide a theoretical framework based on a conceptual delimitation. It would start from defining the ontology of Social Design and the particularities of Photography as an especially useful tool to these ends. On the other hand, the empirical framework we are interested in working with is based on an Anthropology research methodology. It is called 'photovoice' (Wang y Burris, 1997) and consists of an inside observation in which everybody in the vulnerable group takes pictures to document their everyday life and needs. Finally, this work aims to be a little contribution to the UN 2030 Agenda for Sustainable Development. Specifically, to its goal number 4.7, about the need of improving Education Quality.

Santiago Cirugeda Parejo,
José María Canalejas Díaz,
Julia Vallespín Rodríguez
josemariacd@gmail.com



Public financing



method tool project



book paper conference exhibition

Applied Research

F

Research for design



International Research



Sustainability
Social Innovation
Education

HyperAura

Keywords: Virality, Walter Benjamin, Reproduction

Period: 2017 - 2018

Humans generate millions of gigabytes of information on a daily basis, information that is seen as non-material but is actually lifted from a physical and decaying context. Consciously or unconsciously, the physical object is preserved online through the act of uploading and sharing it over the Internet. As it is shared and reshared, a single image is multiplied into several files through algorithms, resulting in its 'mechanical reproduction'. Walter Benjamin argues that the aura, or the allure, of a work of art, diminishes each time it is reproduced. In Benjamin's eyes, this is a negative effect, however, in contemporary society, circulation has become more powerful than ownership and originality through the rise of an open Internet and social media sharing. Virality has come to signify an market opportunity, a ripple through the Internet, something that in the dawn of the Internet was prevented at all costs. This evolution in hypermedia gave birth to the Hyper Aura: An enhanced evolution of singularity.

Mick Jongeling

m.jongeling@hva.nl



Public Financing



project



paper



exhibition



Applied Research

F

Research for Design



International Partners



— others

— Visual Art

— Theory & History

Bio-design in landscape architecture

Keywords: geometry, bio-design, zowers

Period: 2016 - 2021

Bio-design research involves an analysis of the natural forms transmitted in geometric forms that provide the basis for further experimentation. The results of the conducted research have application in the generative landscape - architectural design. The help of contemporary technologies is valuable because it allows the use of generative models in design. In this way, the obtained models carry a strong visual message that leaves a spatial impression implemented in the artificial structure and vividly make up such a hybrid composition semi-organic. Through the form of a flower that is point out as an example, all the qualities of the applied principles are clearly observed, primarily the aesthetic impression, which relies on the harmony and perfect proportions of the elements, and then the stability, firmness and power of such a form. Within the framework of the conducted research, the geometry of flowers or a petals of plant species was studied by methods of parametric modeling and experimental design using the Voronoi diagram and the Delaunay triangulation methodology. One of the examples of the research results realization carried out is the 3D printed model of the Queen Natalia Pavilion (AFGS 2017 - ADMC 2017 finalist). Geometry as a universal analog model that describes and simulates relationships in the structure of natural systems here is the most valuable tool in comparative analysis. Using the Voronoi diagram and Delaunay triangulation methods within the available software applications, nice results can be obtained. Nature offers an inexhaustible source of inspiration while a bio-design approach does not fix entities such as function, form, material, and structure, but combines them by defining them as semi-organic ingredients. Imitation of natural models with the application of geometric principles and biological knowledge, as well as using contemporary technologies, provide solutions which are multilayered, eco-friendly and sustainable.

Biljana Jović, Mirjana Komnenov,

Anđela Mitić

biljana.jovic@sfb.bg.ac.rs



National financing



method tool project product



book



paper



conference



exhib.



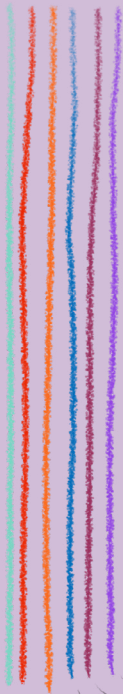
workshop



Applied Research

F

Research for design



- Sculpture
- Visual Art
- Health Care
- Sustainability
- Social Inv.
- Education



National partners

A+T+F

**Research
About,
Through, For
Design**

Methodologies in Art & Design Research

Keywords: methodologies in art & design research

Period: 2018 - 2022

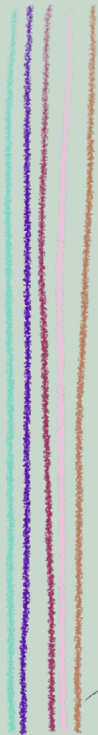
Much of the knowledge that artists and creative designers use, is in their bodies, connected to their person, experiences and context. If our aim is to get this kind of knowledge to become more explicit, and we would like it to become sharable with other creatives, we have to develop a methodology that responds to this situation. One of the issues is, that we - as researchers in and for the creative fields - have to involve creatives much more directly in our research process, preferably as co-actors. But in academic research this is not a conventional approach. How the division of roles between creators and researchers can be productive, is therefore a central question in this study, including: similarities and differences in various contexts, cooperative situations, positions and activities of multiple creatives and other parties involved. And what are the consequences of such an approach when it comes to collaborative knowledge building and the influence of - also 'backwards' chaining - practical use?

Arja Veerman

arja.veerman@hku.nl



Post-Doctoral
Research



method tools



paper



conference



workshop



A

Research
about Design

T

Research
through Design

others
sound
Visual Art
Fashion
Education



Local
Partners

Developing human capital for 21st century economies: introducing design thinking to Chilean schools.

Keywords: design thinking, teacher training, 21st century skills

Period: 2016

The current state of economic development of Chile requires human capital with thinking skills such as, analytical thinking, creative problem solving, and collaboration; all skills deployed extensively during the design process. At the primary and secondary school level, this problem is not solved only with curricular changes, but requires teacher training and support. There is empirical evidence that the international application of design thinking has been successful in education among students and teachers. However, directly importing such models may not be effective given the particularities of the Chilean education system. This interdisciplinary research project sought to identify opportunities for design thinking in Chilean education by developing and testing a training program for 20 teachers and school managers. During extended design thinking training, a range of resources were used to collect, systematize and analyze the information generated by participants (practical exercises, questionnaires, interviews, focus groups, arrays, etc.). Preliminary results show that collaboration activities constituted a high percentage of the program and, in them, participants paired with experts discussing and moderating activities, which facilitated a deep knowledge of their role as educators and their problems of practice. In relation to the acquisition of design thinking tools, the training program was able to generate impact, by providing participants with practical techniques to face challenges in their own context, in terms of improving commitment to learning, and the welfare of their students and their learning outcomes. Participants used the tools presented in the training in concrete interventions, in their specific contexts, through planning and teaching strategies they designed. This way, participants understood the depth of the method as a strategic thinking tool for current and future work, applicable to adapt and meet new and unexpected challenges.

**Catalina Cortés, Úrsula Bravo, Maritza Rivera,
María Jesús Honorato, Peter Lloyd, Derek Jones**
catalinacortes@udd.cl



International financing



method



service



paper



conference



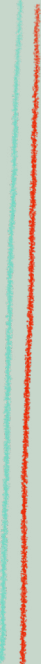
Applied Research

A

Research about design

T

Research through design



Social Innovation
Education



International partners

Epistemology and tools of practice based artistic research and design research

Keywords: speculative design, practice based research, inverse methodology
Period: 2017 - 2021

The Center for Design Research at HAW Hamburg is a platform for practice-based, aesthetic design research and critical design theory. It brings together research projects in the areas of sound design, illustration, communication design, games, textiles, video and installation, VR and AR and sustainable design as well as design theory. We understand design and design theory as cultures of knowledge that contribute to cultural self-understanding while at the same time making culture more productive.

Grebin, Schulz-Schaeffer, Goerne, Brink
anke.haarmann@haw-hamburg.de



National financing



method tool project



paper



book



conference



exhib.



workshop



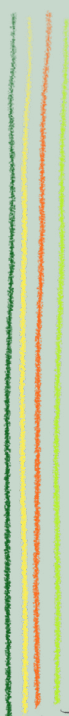
Artistic Research

A

Research about design

T

Research through design



Territory and local production
Sustainability
Communication
Theory & History



National partners

Local design in the global south

Keywords: local design, global south, appropriate technology

Period: 2007 - onwards

South Africans suffer within one of the most unequal societies in the world. However, even the most marginalized people are not without creativity. By partnering with local experts, design can be used to amplify creative activities and achieve appropriate endogenous change. Local design challenges the ethnocentric view of the world brought about through modernization, and hence plays particular interest to our local context, cultural diversity and local needs. In this project, researchers and designers involved in the Design Society Development (DSD) DESIS Lab based in the Faculty of Art, Design and Architecture at the University of Johannesburg partner with local experts to:

- better understand how people act within the limitations of their particular social, cultural, economic, political and environmental contexts.
- explore the ingenuity of everyday expert / lay / informal designers to meet their needs.
- utilise collaborative context-centred design as a means to practically extend human capabilities.
- practically explore the decolonisation of design in the Global South.

A variety of collaborative design research methods within a pragmatic practice-based research paradigm are employed in a range of sub-projects under the LOCAL Design in the Global South project umbrella. Appropriate design research methods are chosen based on their suitability for each sub-project. Sub-projects currently include:

- Lite manufacturing technologies for South Africa – Martin Bolton
- A reusable menstrual pad for South African women – Pia Findlay
- Adaptable eyewear for South Africans – Marcha Naudé
- A design process model for paediatric medical device design in South Africa – Ashton Moseley
- The human-centred design of an irrigation system for small-scale farmers – Oratile Mokgatla
- Technology innovation by small-scale farmers in Johannesburg – Angus Donald Campbell
- Off-grid food processing for micro-enterprises – Antonio Marín Pacheco
- The Beegin appropriate technology beekeeping system – Ivan Leroy Brown.

For more information please visit <https://www.designsocietydevelopment.org/project/local-design-in-the-global-south>

**Angus Donald Campbell, Martin Bolton,
Ashton Bullock, José Antonio Marín Pacheco**
acampbell@uj.ac.za



National Financing



method tools project product service patent



book

paper

conference

exhibit. workshop



Applied Research

T

F

Research through Design

Research for Design

Territory and local production

Nutrition

Health Care

Sustainability

Social Innov.

Service

Product

Education



Local Partners

Practice-led design research. Interplay between design practice and research

Keywords: practice-led research, design

Period: 2013 - on going

The Department of Design has pioneered integrating art and design with research. This has resulted in exhibitions, workshops, conferences, externally-funded research projects and publications. Through these results, 'designerly' ways of thinking and doing have become an important driver for research, and the department has established an international forerunner standing in the development of practice-led research. Strengthening practice-led research in the department's education has resulted in multiple cross-disciplinary courses and research projects in which design methods integrate with science and technology, resulting in innovations like new and advanced materials, new manufacturing methods and business models for circular economy. For instance, CHEMARTS collaboration at the intersection of design, material science and engineering (biomaterials wood and cellulose) has developed novel forms of practice-led multidisciplinary research. This has resulted in design-driven multidisciplinary knowledge that has provided a ground for innovation, and a series of further research projects. Practice-led design research is applied for craft, interaction and service design, material innovations and the design for public policy making. It has had profound effects on education, especially on studio-based pedagogy. It has enabled designers and researchers to use their art, craft and design practice as a vehicle for producing new knowledge, producing results in the form of original artefacts, exhibitions and publications.

Maarit Mäkilä, Pirjo Kääriäinen

kirsi.rinne@aalto.fi



Public financing



method



tool



product



book



paper



conference



exhib.



workshop



Artistic Research

T

Research through design

F

Research for design

- Sustainability
- Social Innovation
- Service
- Product



International partners

Bicycle frame fabrication methods

Keywords: bicycle , crafttechnology, DIY

Period: 2012 - on going

Building a bicycle from scratch is a multidisciplinary Experience. An exciting fabrication process involving art and science, combining design and engineering for the purpose of creating a unique bond between the machine and rider.

The project's aim is to reinvent the way bicycle frames are fabricated and to demonstrate the linkage of open source technologies in a 'Do It Yourself' culture. for more info please visit www.frame-story.com Project outcomes are the result of extensive R&D of design processes and scenarios that correspond to the present cultural shifting in terms of production and the way it influences the end user's fabrication schemes. In order to regain control over the design scheme, most projects are self-initiated and self-contained. Design processes and chain supply converge to a minimum and diminish the involvement of a sub-contractor, or a third party, or an outsourcing of any kind. The deliverables as an ongoing process may suggest encounters of basic design elements: technology and matter, pointing out the ideal glue combining and fusing these two elements together: defining craft technology as a state of mind in a postindustrial era.

Atar Brosh

atibro@gmail.com



Private funding



method tool project product service



Exhibition



Applied Research

A

Research about design

T

Research through design

F

Research for design

Other field

Territory and local production

Sustainability

Service

Product



International partners

Correlations between art and design Foundations and strategic design: understanding and exploratory studies

Keywords: Art and Design Foundations, Strategic Design

Period: 2017 - 2018

This research will cover an epistemological discussion and comparative studies of works and thinking about how Design contributes as a field of knowledge in the product strategic design. From a common point – Art and Design Foundations – a transdisciplinary approach will be used since these Foundations intend to serve the different sub-areas of Arts and Design. The research will undertake an exploratory observation of undergraduate students in two design courses in which Art and Design Foundations is taught, comparing their observation of tridimensional objects in the beginning and after their basic or undergrad studies. Mixed techniques will be used, such as eye-tracking wireless glasses and questionnaires to verify if they develop a distinctive pathway of looking tridimensional objects that gives them a specific way of making judgments and decisions during strategic design. The focus is continuing a series of experiments related to the design practice in the strategic scope that is taking place at NEXT -Núcleo de Experimentação Tridimensional of Art and Design Department at Pontifical Catholic University of Rio de Janeiro-PUC-Rio, Brasil (<http://next.dad.puc-rio.br>). Thus, here, a creative artifact will be the basis of the contribution to knowledge. The expected result of this research is the development of the discussion about a Design identity, specifically the Strategic Design, through a critique of its methods and the rise of experimentation within its processes.

Claudio Magalhães

claudio-design@puc-rio.bra



Postdoctoral
financing



method



product



paper



exhibition



Basic Research

A

Research about
design

T

Research through
design

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Research for
design



Others fields

Product

Education

Theory & History



International
partners

Design heuristics for idea generation

Keywords: creativity, idea generation, design

Period: 2010 - 2018

Our research agenda was to study how designers create new ideas for products in order to uncover ways to aid idea generation. While a variety of generation strategies have been proposed, they lack a grounding in empirical studies, and there is little evidence available about their effectiveness. We set out to conduct field and cases studies of product designers pursuing highly varied design problems. We also held protocol sessions where designers and students worked to generate multiple ideas for a given design problem. These research studies collected many instances of product design generation; and by comparing across these observations, we identified systematic patterns in how designers create new ideas. For example, one pattern focuses on the "opposite side" of a product to take advantage of unused surfaces for design features. We observed an innovative shoe design that made use of the opposite surface -- the shoe bottom -- to serve additional purposes. One product used the shoe bottom as a means of fastening shoelaces by providing additional tension, while another design creates animal prints when the wearer walks across sand. The strategy of "considering the opposite surface" presents an opportunity to expand possible designs. Since this pattern was identified, it can now be applied to new design problems to guide potential innovations. For example, a tabletop might be considered for the opposite surface it provides underneath, and new opportunities in its design may arise. The design strategies identified through these research studies are called "heuristics" because they are guides leading to possible new designs rather than deterministic rules. The patterns are formulated as general strategies that can be applied in product design, and they are illustrated with two examples of existing products showing their use. The 77 different patterns identified, called Design Heuristics, are available for designers to use as strategies to help in generating many different concepts from which to choose. Further empirical studies have documented their effectiveness in assisting designers (from novice to expert) in introducing variations into their candidate designs. Our evidence-based approach is the first to tie empirically-validated design principles to successful idea generation outcomes.

Colleen Seifert, Shanna Daly, Seda Yilmaz

seifert@umich.edu



National financing



method tool

product



paper

conference

workshop



Basic Research

A

Research about design

T

Research through design

F

Research for design

Product

Education



International partners

Global picture

*A final synthesis of
research in Cumulus*

Research fields

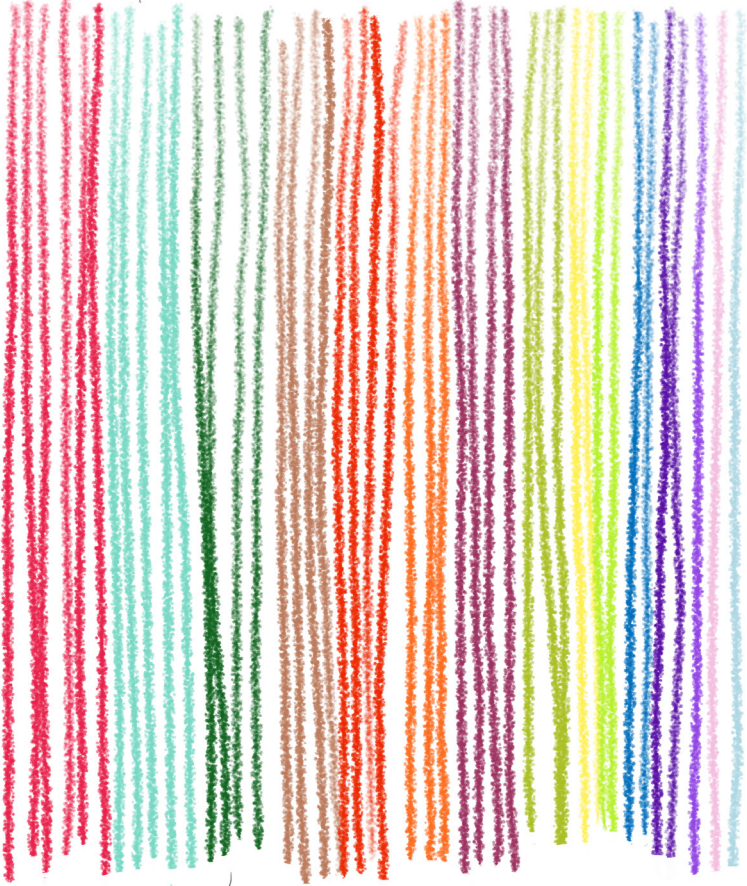
Design research has a multi/trans-disciplinary nature. The answer to the question regarding the most relevant research fields in art and design nowadays has confirmed this aspect: 90% of the research in Cumulus has a multidisciplinary character with an understanding of at least three research fields. The first is Product, then Education and History & Theory of Design, followed by Social Innovation, Sustainability and Visual Arts. The option 'Others' was deliberately included in the list of possible research areas to identify any new research fields not present in the multiple-choice list. From the detailed analysis of these responses, a particular research interest has emerged in body perception/aesthetics; architecture/urban planning; animation/web art/documentary film; and finally, the sectors of strategy management and gender authority.

It is interesting to see how much of the so-called 'artistic research' has more to do with the design field than with art and media. These data lead to broader considerations of research approaches, as the research sampled within the mapping would be recognized within the category of 'artistic research', not from the perspective of the area of inquiry but instead of the research strategies and approach itself. This aspect could be a future area of study and investigation on what is meant by artistic research applied to design and what kind of repercussions it has in the research process and results.

product

education

social innovation



theory & history

others

visual art






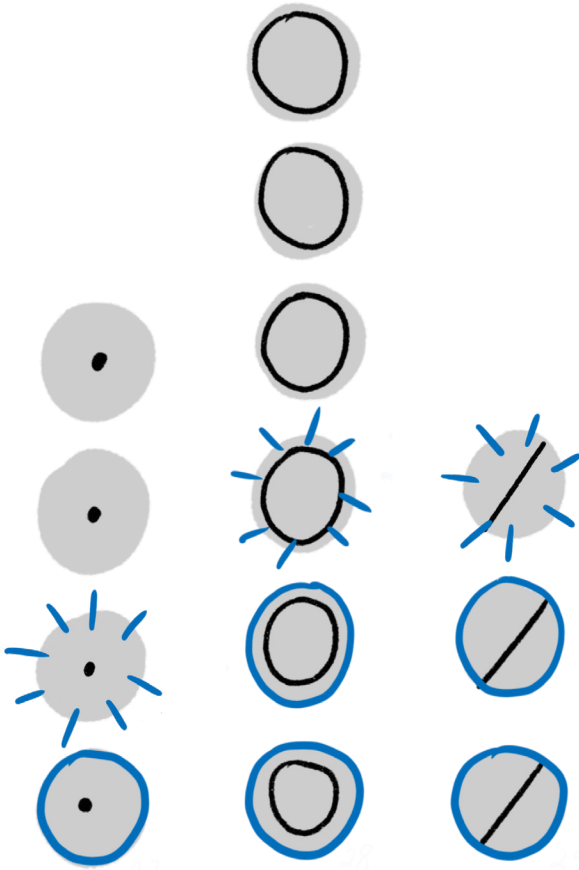
Partners involved


Within the descriptive categories of research by art and design, it was decided to include a question about the partners involved in research to highlight the network that the research establishes from time to time and the different scales in which it operates. Many kinds of research showed collaborations at the national level by analyzing the mapping of partners involved. Nearly 30 per cent of survey participants responded that they have national partners, followed by 25 per cent of international partners, and finally, only 15 per cent of local partners.


The quantitative analysis of these data was then combined with the different types of funding to highlight possible relationships and links between the type of funding and the level of research collaboration. The mapping showed many international and local collaborations for public funding and the majority of collaborations in the country for private funding. The data were subsequently cross-referenced regarding the geographic affiliation of the research to reveal a spatial relationship that could influence the different research collaborations. European-level research is the most nationally conducted; research on broader geographic borders, such as Africa, reveals the most local collaborations.


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-  = 5 UNITS
-  = 1 UNIT



 local partners

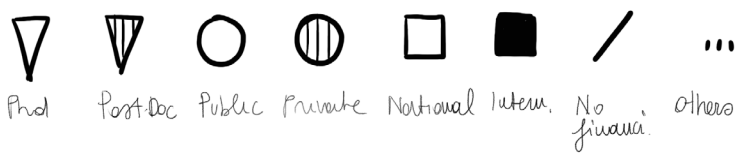
 national partners

 international partners

Type of funding

Within the mapping activity of research by art and design, it was decided to consider the purely economic aspect linked to the type of research funding; possible research grants were divided into national/international, public/private, or doctoral (PhD, Post-Doctoral Research) funding.

However, 10 per cent of the participants responded that they conducted research without any funding; the remaining 90 per cent, most funding comes equally from both the public and private sectors. Through this question, it was also possible to highlight how both doctoral and undergraduate research were collected in the Cumulus survey; precisely, an equal percentage of 20 per cent of the sample collected resulted in the doctoral field, and the remaining 80 per cent was conducted at the undergraduate level. Research in the doctoral field embraces more doctoral than post-doctoral funding, which, as is well known, has not yet been implemented in many countries, such for example in Italy.



Phd Post-Doc Public Private National Intern. No financial Others

Outcomes

The fourth question in the questionnaire highlights the type of outcomes expected from individual research, which one produces an outcome in design rather than art and media and how these differ from each other. We can identify a preponderance of material outputs, such as products and patents. Where the research deals with process innovation or social needs, the outcomes began immaterial such as services, methods, tools, or projects. The first relevant aspect related to the research outputs within Cumulus is that each research involves the coexistence of at least two/three different outputs categories. The most significant percentage is represented by project and methods development outputs. The data highlight that many outputs are intangible/immaterial rather than tangible/material (for example, a product, a patent, or, more generally, an artefact). This data supports the current theory of the so-called 'eclipse of the object' in contemporary design culture and the discipline shift towards the design of services or processes rather than products.

how to read it:

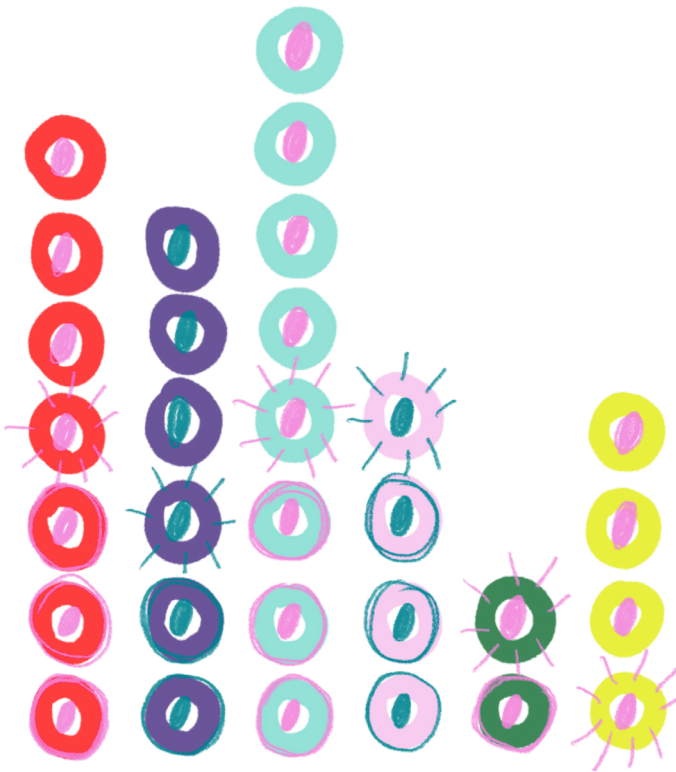
○ = 1 UNIT

☀ = 5 UNITS

⊙ = 10 UNITS

● = tangible result

● = intangible result



method



tool



project



product



service



patent

Dissemination

Another aspect that defines research activity is the type of dissemination of results. As predictable, the mapping showed the presence of at least two types of dissemination of results: the scientific essay (i.e. paper) and the workshop/conferences. It is interesting to highlight how if the scientific paper has a broader range of sharing, probably due to its ease of access and high scientific character, nevertheless it shows less participation than the second type of dissemination, such as conferences, workshops, etc., where people get involved directly, and the participation is active.

Another aspect that defines the research activity is the type of dissemination. As predictable, the mapping showed the presence of at least two types of dissemination of results, among which the scientific essay (i.e., paper), probably due to its ease of access but at the same time high scientific character, turns out to be the type preferred by researchers to disseminate their activity. This observation explains the choice of dissemination that we could define as a combination of results, between the types of the scientific article, for example, or the book together with the organization of conferences, workshops or, if necessary, exhibitions. This combined dissemination allows them to reach the most significant number of people, ensuring a scientific character to the disseminated knowledge and, on the other hand, promoting active participation in the research results that can further implement the results.



36



38



45



57



30



BOOK



PAPER



CONFER.



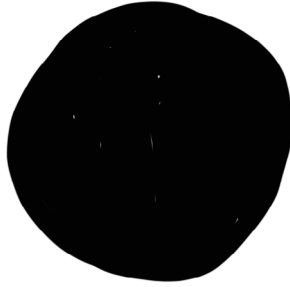
EXHIB.



WORKSHOP

Type of research

The sixth questionnaire question concerns the types of research classification by art, design, and media. It was decided to refer to the standard classification of basic, applied, and clinical research (Buchanan, 2001), with artistic research as the third category to broaden the spectrum of inquiry. Research by art is indeed an area yet to be codified and, perhaps in some places, not fully recognized. While design research has only recently been recognized as a field of scientific inquiry, artistic research may be excluded from the list. However, for simplicity of classification, the term artistic research is used to mean all those scientific processes applied to art and, in any case, all those artistic actions and practices that can be borrowed as research processes in other fields. The data collected through the Survey showed a majority of applied research followed by 26 per cent of basic research and 23 per cent of artistic research. Only 1 per cent of the research reported conducting purely clinical research. Among other observations, it was relevant to point out that artistic research within Cumulus is not necessarily associated with an 'artistic research' field such as fashion, visual arts, sound, etc., as one would expect. Thus, the data show a recognition related more to the process aspect, which would be declined from time to time as a strategy of inquiry to be applied to different research topics.



 BASED • APPLIED  ARTISTIC  CLINICAL

Christopher Frayling's categories

The last question of the survey concerns the distinction of research by art and design attributed to Christopher Frayling (1993-'94). As pointed out initially, the well-known research categories attributed to Christopher Frayling (1993) were chosen as the key to reading and classifying the individual research collected in Cumulus. Through the three definitions of 'research about art and design', 'research through art and design', and 'research for art and design', Frayling offers us a gnoseological apparatus for constructing the fundamentals of the discipline. The combination that identifies Frayling through describing the three categories of the two research areas of art and design fits well with Cumulus' focus on mapping the actual scenario. The survey showed that most of the research conducted a type of investigation that uses the design discipline's characteristics as research tools (research through), followed by more theoretical/historical research on the fundamental aspects of the discipline (research about). The third research approach, in order of percentage, is represented by the combination of research through/research about, while purely clinical research (research for) is a minor presence within the analyzed sample. These data show us that, in line with current trends, art and design research has increasingly shifted to 'research through' the discipline.

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A+T+F

A Research about **T** Research through **F** Research for



Public financing



method



project



Education

Theory & History

Product



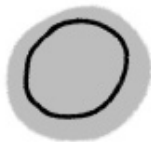
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Research through
design



Artistic
research



National
partners

Conclusions

The quantitative and qualitative results of the mapping conducted within the Cumulus survey perimeter made it possible to outline, albeit within the limits of such an operation, an overview of current research in art, design, and media in the Cumulus Association. Although, from the beginning, it has been confronted with the impossibility of returning a real image of research in art and design, as the research itself by its nature is structured as a constantly evolving phenomenon, the mapping operation allowed to detect of salient descriptive characters of the research from which to formulate the appropriate deductions in response to the research questions. The data collected highlighted an overwhelming majority of multidisciplinary research (over 90% of the researchers participating in the Survey), with a prevalence in the research sectors relating to the Product, History and Theory of Design, and Teaching. The mapping has also highlighted the emergence of new research areas, especially related to the body perception/aesthetics sector, architecture/urban planning, animation/web art/documentary film and strategy management and gender authority. Among the research approaches, there have been numerous approaches of the 'artistic research' type, especially in research sectors -contrary to what one might think- not related to applied arts but to design. This data was found to be predominant within the research conducted in Northern Europe, which probably holds a different system than the other countries in the design study. On the other hand, concerning the range of action of individual researchers, it was shown that most of the research within the Cumulus Community essentially conducts research at a national level, and kinds of research of a local nature are few and confined to the less developed countries

of the world. The analysis of the research networks also leads to an analysis of the different funding available for the collected research. The types of funding are distributed equally in the public and private spheres. However, where even doctoral research corresponding to 1/5 of the sample collected is considered, most research funding is public. These data are still partial, referring to the survey sample collected. However, they allow us, to a certain extent, to outline the main features of the current research in Cumulus. It is through data analysis concerning the results of individual searches and the types of research approaches that the most interesting aspect emerges with respect to the mapping results. Both the data regarding the results of individual research and the types of research approaches highlight an important aspect of the research belonging to Cumulus, common to many other trends highlighted by current research in design. Many of the outputs envisaged as research results are essentially distributed between results of an intangible, immaterial nature, such as 'methods' or 'projects', and in equal measure, most design research approaches are identified in the typology by research through design. The two data together confirm the shift in the interest of research in design from the design of artefacts to that of processes and experiences. In 'research through design' (RTD), design becomes the research tool; it is no longer the object of research as in the case of 'research about design' (RAD), where the research is aimed at providing more theoretical, basic knowledge about the discipline, nor is designed the only subject that conducts, for example, specific research aimed at informing its field as in the case of 'research for design' (RFD). However, in RTD, design somehow dematerializes itself and becomes the medium of research, its language. These observations allow us to support the theory that 'research through design' would show similarities with two important aspects: firstly, the eclipse of the object, intended as a design purpose but also an object of research, and secondly, the essential role of research through design as a gnoseological foundation for the development of a genuine research paradigm in project-grounded design (Findeli, 2008; Jonas, 2012; Zimmerman, Stoltermann, Forlizzi (2010). The first aspect resonates with what was previously highlighted by

Richard Buchanan (1992) through the construction of the 'Four Orders of Design', expanding the territories where the project operates well beyond the scenario described by the Science of the Artificial (Simon, 1969). Here the design research shifts from a concrete plan, linked to the design of things, to an abstract plan, linked to the design of processes. The second aspect instead refers to the reflections carried out by Wolfgang Jonas (2007) regarding the current meaning of the research categories of Christopher Frayling (1993-'94) and the 'research through design'. If on the one hand, the increasing interest in the research category of 'research through design' (RTD) would be justified by the very problems that address it, on the other hand, it is precisely its capacity of transcending in some way the disciplinary boundaries that allow a wider field of experimentation and creation. The results obtained through the research mapping operation seem to confirm the reflections within the scientific debate on design research and, at the same time, suggest further possible scenarios for research in design within these observations. Particular attention should be paid to the link between design research and artistic research within the mapping conducted. Although it was not possible to further investigate the data relating to the research identified within the 'artistic research' approach, the overlapping of the data relating to the fields of application revealed that the majority of the researchers that answered the questionnaire stated that they use an artistic research methodology and do not belong, as can be easily imagined, to research sectors more properly linked to applied arts, but rather to areas of investigation relating to design. This first quantitative observation of the data has led to the formulation of the hypothesis of an artistic approach that goes well beyond its research territory. Somehow, this methodology also extends to other contiguous sectors, such as design, which could inform the already contaminated territory of the social sciences of strategic design..

Marta Laureti

Sapienza University of Rome

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ReVeDA means Research Vectors in Design and the Arts and started as a Working Group in Cumulus since 2014. The primary aim of ReVeDA is to offer an open space for discussion on research in Design and the Arts, while showcasing experiences developed within the Cumulus Community and locally in the conference hosting institution.

This volume collects the results of the mapping activity promoted by ReVeDA WG with the aim to explore the research in Design, Arts and New Media within the Cumulus members.

Both Art and Design found in the territory of research their common languages of ways of knowing, where often practice led theory. If we compare to other scientific fields, the research through Design, Art and Media has a young history and as a consequence, it has a problematic acknowledgment within the academic institutions and the society. At the same time, a wide demand is emerging to lead innovation and strategies for the development of products and services, both for society and wbusiness. Nevertheless, the research has the opportunity nowadays to give an important support for the solution of complex problems we never faced before.

CUMULUS THINK TANK SERIES

The Cumulus Think Tank publications are created and supported by the Cumulus the International Association of Universities and Colleges of Art, Design and Media. The Cumulus Think Tank is designed to facilitate gathering and sharing of know-how and experience of academics, students and staff in collaboration with partners and other professionals in art, design and media.

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