

Editorial

'Getting Going' – Research by Design

A thematic view

Research by Design is the theme of this first special guest edited issue of FORMakademisk. In this issue we look into a growing domain of design research that takes up relations between practice and theory that are pertinent for inquiry in the interdisciplinary approaches and frameworks that are often central to research in design (Rust et al. 2005). As the articles gathered here show, this is research that spans a range of established and emerging areas and their methods and analyses (e.g. Jonas 2007). The articles indicate how far design research has moved from earlier locations in craft traditions and historical analyses and characterisations and perspectives lodged in industrial design. These views do still matter, but they are now part of the changing profession of design and a burgeoning body of international research.

Recent related events

This journal is one of several new online initiatives in making design research both visible and accessible through its open journal system approach. It is part of the extension and coalescence of design research across media and technologies, as well as in the appearance of newer domains such as interaction and communication design and more recently service design. Oslo School of Architecture and design (AHO) has been a leading figure in this latter domain having last November hosted the *1st Nordic Service Design Research Conference* (www.aho.no/service/design09). A little earlier the same year in September, AHO and the University of Oslo co-hosted the *3rd Nordic Design Research Conference Nordes 09* (www.nordes.org). Design research that is a medley of practice and theory prevailed at both these conferences.

These conferences followed the ongoing research seminar series on design at the Institute of Design (IDE) at AHO at which design specialists, doctoral students and designer-researchers actively engage in building a research culture around and interdisciplinary approaches to design research, project based inquiry and related teaching and professional and public outreach.

Research by design

Such an approach to knowledge building at a wider level has also been central to the ongoing growth of research at the IDE via project based design research funded principally by the Research Council of Norway that is in part represented in this issue. The building of insights, pertinent methods and reflections on and in action, as Schön (1983) earlier argued, is also a feature of the ongoing doctoral research programme at AHO. Since its start 25 years ago, this programme has continuously developed the conception of design research in general and, more recently, research by design in particular. For the 2009 intake, research by design was placed at its core.

Developing the conception of research by design is also about situating such research in a wider system and communication oriented views on designing as knowledge production (Morrison 2010 in press). This is not necessarily new to all our readers but the demonstration of practice based inquiry and the potential research practices are still far from settled and are in full development (Morrison 2010b in press). Such inquiry is often time consuming and risky especially because both designing as practice and researching within an academic format has to be simultaneously developed. Such inquiry is generative and looks towards what Johanne Drucker (2009) has recently discussed as speculative design in which uncertainty and openness to the unfolding character of process oriented development and study are central challenges to address. Such inquiry is not about what is given but it involves the creation of its own subject and speculates about the future of its results. Such research needs our reflection in and on action, together with crisp and creative theorising to avoid circular argumentation (Biggs & Büchler 2008).

An international seminar on Research by Design

This special issue of FORMakademisk reflects this as an extended outcome of an *International Research Seminar on Research by Design* held at AHO in December 2008 that was also attended by the 17 students in that years' new doctoral school intake with its focus on research by design. Since then, at AHO we have worked hard to further the many issues raised in that seminar. We have taken several of the presentations through to the full articles included here and joined with them others from related projects.

The seminar benefitted from knowledge and experience from international scholars and design specialists in diverse domains, such as Chris Rust (UK), Mick Eekhout (The Netherlands) and Pattie Belle Hastings (US). Importantly, it also presented our own research along with that of students in the midst of tackling matters of practice and theory in facing the demands of researching emerging technologies and their contexts of situated use.

As a whole, this special issue covers the often difficult demands that designer-researchers and researchers of design meet when engaging in practice-based inquiry. This applies to areas of architecture, industrial and interaction design. It also implicates practice-based inquiry and critique in designing for electronic installation art as well as prototyping social media and interfaces for the rapidly expanding area of mobile communication.

On scope and review

The articles included here do not attempt to cover all areas of design research; we intend that they give some bearing towards types of issues and some of the means of addressing them for research by design. Yet the research presented is concerned with 'getting going' with research by design: it tackles difficult issues such as how to mediate research via video and the need for interface design research to shift from more functionalist views to more communicatively and experience oriented ones that are informed by analysis and practice in fields such as animation and film studies.

Each article has been through anonymous international peer review. This too matters hugely for design research and for designer-researchers who are negotiating different types of knowledge, modes of expression and the voicing of critical analysis. The many reviewers have provided invaluable suggestions and some considered critique

from which the articles have benefitted. This scholarly exchange is as important for design research as are the perhaps more established practices of studio and project critiques.

As a new, innovative online journal, FORMakademisk has provided us with an invaluable space and digital means for shaping and sharing research by design perspectives. This issue includes three articles with numerous videos: design research is still in its infancy as regards taking up digital media as part of its 'digital research rhetoric'.

From seminars to publication

This was the theme of a research seminar that IDE at AHO co-hosted with InterMedia, University of Oslo in 2009 that was attended by most of the contributors to this issue. Funded by the EU Culture 2000 programme, and part of a project called gRIG (Guild for Reality Integrators and Generators), the seminar was paired with one on mixed reality narratives. The seminars highlighted the potential for design related research to take up online means as part of communicating the contexts, processes and analytical rhetorics of research by design.

This is a shared developmental design and research interest for IDE and colleagues at the University of Oslo at InterMedia, The Department of Media and Communication and the Department of Informatics. The gRIG supported seminars importantly linked online research mediation with key initiatives in relating research to computational media. Design research covers many fields and one of its challenges is to keep making links in its interdisciplinary moves between domains and the selections that it makes within and across knowledge domains and their various formations.

Online research rhetoric

Online research rhetoric may not be so well known for design researchers. However, it offers great potential as design and for design research. This is what we also tried to achieve in looking across the activities of research projects rich in practice, research seminar events and their relations to online publication, employing a diversity of media and writing styles.

It is important that these seminars were attended by the editors of two leading journals in rhetoric and technology: Cheryl Ball is the editor of the leading online journal *KARIOS* (<http://kairos.technorhetoric.net/>) and Gail Hawisher is one of the founding editors of *Computers & Composition* (<http://computersandcomposition.osu.edu/>). This special issue has also benefitted from their participation and that of the array of participants motivated to discuss rhetoric, technology, mixed reality and design.

The above-mentioned Oslo based design researchers are busy with a special issue of *Computers & Composition* that centres on interaction and communication design. Research by design is again centre stage. Such research is also now well established in the impressive online publication the *International Journal of Design Research* (www.ijdesign.org) where research from two of our projects has recently been published. This journal allows for media rich presentations of practice-based inquiry while satisfying formal academic rigour.

We mention these events and venues as they too are an important part of the international research arenas through which research by design is being realised. They build on earlier insights and initiatives, as Birger Sevaldson's article documents and

discusses. In terms of 'getting going' we refer to them to show that research by design is much more than a tangle of unclear threads and terms; designers and researchers are actively taking up research by design not only in their daily inquiry but also in how they set about and succeed in communicating it online.

We believe that design researchers have an important part to play in building online research rhetoric that is part of designing design research in a digital age. They bring many talents to the emerging multimodal character of possible research mediation, through graphic design and system oriented and communication oriented perspectives and practices. Visual and spatial aspects of an online design informed research rhetoric are open for design researchers, just as insights from practice and pedagogy that design schools offer that more logo-centric rhetoric does not traditionally address. Sevaldson (2005) for example looks at this in terms of time in design and the role of student projects in connection with experimentation, materials and the potential articulations of digital technologies, system oriented views and student production based learning.

On the articles

The articles below cover a variety of interests and concerns. In the opening text, Birger Sevaldson presents an overview of approaches to research by design and practice based inquiry in design research. While he has the benefit of drawing on a range of publications and studies, he offers a critical view on how we might more fully understand the complexities of research in design and some of the major formulations and concepts that have been developed to account for it.

In his article entitled 'Performance-oriented architecture', Michael Hensel addresses the potential of a biological paradigm for architectural design and the built environment. Drawing on analytical and practice based genealogies of 'performance', he moves to conceptualise form and function into a synergetic mix of the natural and cultural. This he connects to the spatial and material in architecture. Overall, he suggests there is room for a performance-oriented perspective, one that is under-girded by inquiry in practice and supported by theory. Systems theory comes into play here as does human agency and relations to biological systems and their complexities.

On a different note, 'Have You Heard This?' by Jørn Knutsen and Andrew Morrison concerns an investigation of design in mobile social software and potential for independent and non-commercial user-generated music. This article goes inside the processes of designing social software for mobile phones and the place of what the authors call communicative prototyping. They advance a media and culturally centred view of social software design and development devised with a major public service broadcaster. Mixed methods are placed in a socio-cultural frame for design research that complement the important role of interaction designers in a developmental view on social software for smartphones. The article is an outcome of a practice-based research project that is more widely conducted in conjunction with a leading research institution working with social science and Human Computer Interaction (HCI). Theoretically the article investigates prototyping in a communicative mode.

The fourth article called 'Connecting motional form to interface actions in web browsing' by Jon Olav Eikenes employs motion sketching as its main means. This too is part of the same project as the previous article. However, it focuses on complex visual movement that is now a phenomenon on the web and on mobiles. Practical experiment-

ation is presented in interface and interaction design so as to investigate how to link motional form to interface actions. These are analysed using social semiotics and some aspects of activity theory, domains not always connected in the manner Eikenes achieves. He takes this over into a considered view of these fields by generating new core concepts and ten provisional principles that may help us better understand, analyse and design motional form in digital interfaces, online and on the move.

Timo Arnall & Einar Sneve Martinussen call their article 'Depth of Field'. This refers to their interest in investigating ways in which film may be applied to present an approach to inquiry into the emerging technology of RFID (Radio Frequency Identification) through what they term 'discursive design'. They develop this through reference to work in critical design, extending its focus from an art domain into one of working experimentally with new 'invisible' technologies. These they frame as a mix of product and interaction design that they then reflect on, analytically and presentationally via staged video inserts. These provide readers with access to their overall TOUCH project, its design and modes of explanation (from wireless tools to reaching a wider design audience). Again, the research is located in a socio-cultural frame that places interaction design experiments in relation to cultural and socio-technical dimensions and not only technocratic deterministic ones.

The final article is on 'Designing performativity for mixed reality installations'. It is co-authored by a group of artist-designers, media developers and researchers. Morrison et al. apply the concept of performativity to two electronic art installation works in terms of their design (as opposed to for example and aesthetic analysis). The article reflects on diverse constructs of performativity and proposes that such installation works may increasingly need to also be understood in their design origins and processes of collaborative construction in which resources for mediated meaning making are generated so as to allow for participation. 'Performative design' is offered as a term to encompass not only designing for engagement in such electronic arts environments but other ones where participation rather than spectatorship, or browsing, are the intention or the given take on production.

This final article also offers a variety of styles in its composition, using many images, as is the case with many of the earlier articles in this special issue. Readers of online journals may now have access to large colour images and high quality video. We meet these in our daily professional and personal uses of the web and increasingly mobiles. This article does not offer detailed video insights into production processes, but it points to the potential of multimodal digital ethnographic accounts with collaboration at its heart and inscribed within its authorship.

Getting, going ... gone!

This special issue intends to contribute to the discourse about design research in general and that of research by design especially through theorizing and by presenting and analysing cases. It demonstrates these themes in the research of contemporary discussions in architecture and especially design for interaction and media and contexts of use. This reflects back into a discussion on online academic publishing where more media rich modes change the conditions for this format.

We hope that the texts presented here offer some online evidence for our practice-based inquiry, one that is partnered with critical, reflexive analysis. That research by

design may lead to concept building is shown here. That materials, motives and media are important traverse the articles. Engaging in the dynamics of design and design research and in looking back to earlier approaches and theories is also covered.

'Getting, going ... gone.' The title of this editorial suggests movement and activity. We do not simply see research as some sort of auction and sale to the highest bidder. But what we have suggested is that research by design is very much about action and reflection. As part of this we also suggest that what might also be gone are the days of print-only publication about design research. All in all, we hope that this special issue will make it possible for readers to link to instances of other online practice-based research and to be able to situate that in relation to other mediations by designers and researchers. We believe that the time has come for design research to take up online research rhetoric as a specialist, interdisciplinary field so that designers and designer-researchers may better connect and communicate designing research and researching design. We see this special issue as connected to a move into online design research publication achieved by the now well-revered *International Journal of Design* (www.ijdesign.org) and furthered by the more recent ICOGRADA supported web journal *Iridescent* (<http://iridescent.icograda.org>) with its focus on communication and graphic design.

FORMakademisk is undergoing revision in its mediation online. We are happy to have contributed to this process and to see actual video in reflection on and in action from research projects where designers' work and its conceptual roles are both amplified.

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