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SHARING THE HIDDEN TREASURE IN PICTORIALS

The idea of images as a foundational mode of creating and articulating knowledge about interactivity has been gaining traction in HCI and interaction design. The use of photography and imagery has long been foundational in traditional schools of design. Inventories of "the best" such schools—however subjective—can be found in many business press sources [1]. Here, we privilege two design schools as exemplars of these traditions, owing to their associations with two key figures, László Moholy-Nagy and William Gaver. Famous for its history in connecting photography and design, the Institute of Design in Chicago was founded some 75 years ago by painter and photographer László Moholy-Nagy from the German Bauhaus [2]. In HCI the centrality of visual form has been advanced notably by Goldsmiths at the University of London under the stewardship of William Gaver [3]. Privileging these two institutions here must be accompanied by the awareness that many other fine schools and distinguished figures in the design tradition were equally important in establishing this foundational role for photography and imagery.

In HCI specifically, the importance of images, per se—in a sense that includes but also extends beyond the recording of design process or presentation of concepts—has a more nascent history. The Visual Thinking Gallery that has appeared on >>>>

SPECIAL TOPIC
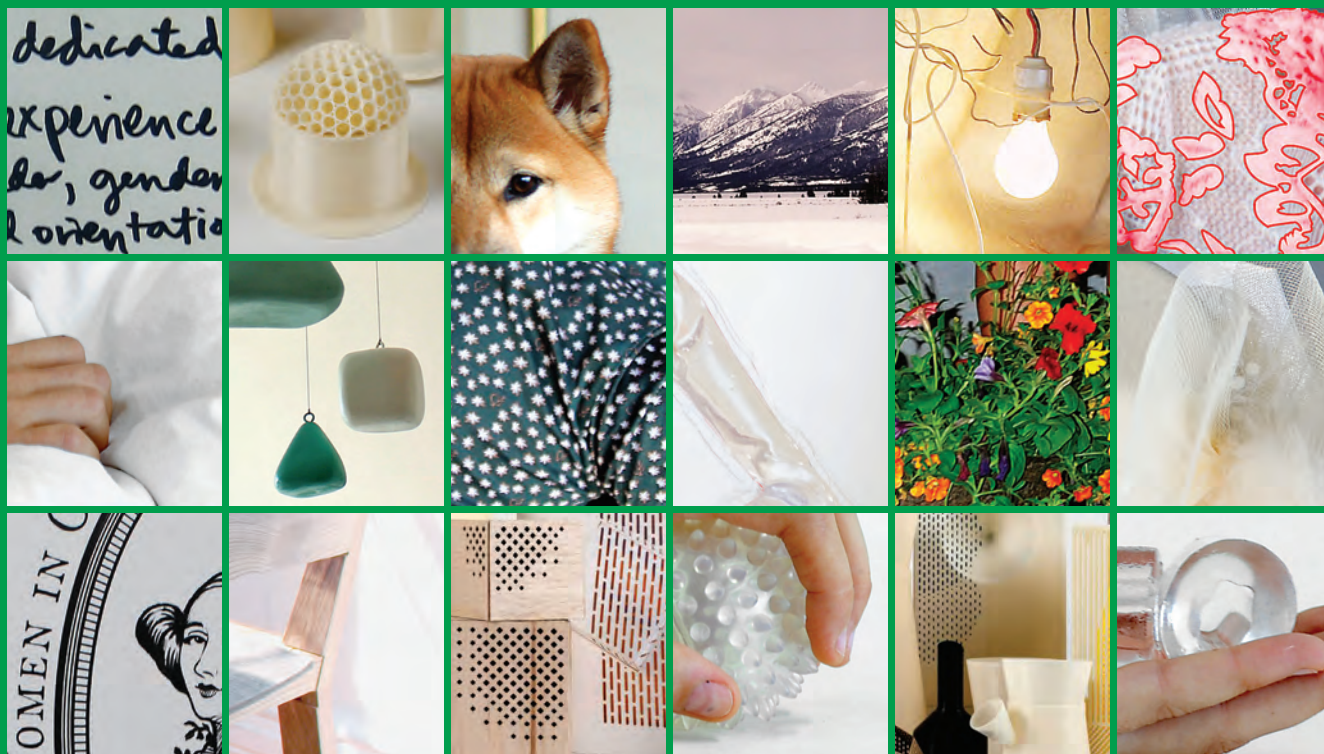
>>>> the inside back page of each issue of *Interactions* since September 2011 [4] presents a photograph relating in some way to digital interactivity and design with only very limited text indicating a title, contributor, genre or type of connection, and caption. The core idea of the Visual Thinking Gallery is that the photograph—and its quality as a photograph *in and of itself*—is an important form of knowledge articulation, more important than the text for this form of contribution. A workshop on visual thinking was held at CHI 2012 [5]. In 2013, a primarily visual, image-oriented paper was accepted into the technical program at NordiChi—possibly the first accepted archival paper in a SIGCHI technical program to foreground images over text in articulating its core contribution [6]. And at DIS 2014, a new pictorials track [7] was introduced in which submitted pictorial essays were reviewed according to standards similar to those of other papers in the technical program; a number of them appeared as archival work.

Among the pictorials submitted to DIS 2014 are a treasure trove of images worth sharing. Here, we present a curated selection of the images that appeared in the submitted pictorials with some brief textual descriptions—just enough to state the importance of each image, but not so much as to preclude the images from speaking for themselves. The images combine to form a collection showing a range of different ways in which images serve as first-class exemplars of interaction design, including but not limited to:

- images as a record of making
- images as a form of making
- images as a record of process
- images as design ethnography
- images as commentary on interaction design
- images as purely aesthetic reflection on interactivity
- images as social commentary in the perspective of interaction design
- images as a record of inspiration
- images for reflection to inform a process
- images as a record of contexts and environments
- images as a record of concepts
- images as a record of aesthetic property (i.e., materiality).

In curating these images, we have endeavored to select images that are both interesting in their implications for interaction design and also fine images in their own right.

INVITATION

We believe that everyone can participate in making images a foundational mode of creating and articulating knowledge about interactivity. Our goal is to invite and encourage our community to consider the quality of the images they use and the roles images play in interaction design in HCI practice, education, research, scholarship, and creative activity. Visual thinking belongs to and in our community.

ACKNOWLEDGMENTS

In the American context, we must recognize the Institute of Design for its foundational role in the link between photography and design. We also especially thank Nadine Jarvis and David Cameron for their important role in the DIS 2014 Pictorials track, and indeed the Interaction Research Studio, Goldsmiths, University of London for its role in promoting visuality in HCI. We also thank especially Elizabeth Churchill, James Pierce, David Roedl, and Ron Wakkary for their roles in advancing visual thinking in HCI. We also thank the many participants of the CHI 2012 workshop [5] as well as everyone involved in the DIS 2014 Pictorials track.

ENDNOTES

1. See for example: images.businessweek.com/ss/09/09/0930_worlds_best_design_schools or www.businessinsider.com/the-worlds-25-best-design-schools-2012-11
2. www.id.iit.edu
3. www.gold.ac.uk/interaction
4. The Visual Thinking Gallery and its motivations are first introduced—with the very kind encouragement of Ron Wakkary—in Blevis, E. Digital imagery as meaning and form in HCI and design: An introduction to the Visual Thinking Backpage Gallery. *Interactions 18*, 5 (Sept.–Oct. 2011), 60–65.
5. Blevis, E., Churchill, E., Odom, W., Pierce, J., Roedl, D., and Wakkary, R. Visual thinking and digital imagery. *CHI'12 Extended Abstracts on Human Factors in Computing Systems.* ACM, New York, 2012, 2715–2718.
6. Jarvis, N., Cameron, D., and Boucher, A. 2012. Attention to detail: Annotations of a design process. *Proc. of the 7th Nordic Conference on Human-Computer Interaction.* ACM, New York, 2012, 11–20.
7. Cameron, D., Hauser, S., Jarvis, N., and Odom, W., eds. Pictorials. *Proc. of the 2014 Conference on Designing Interactive Systems.* ACM, New York, 2014, 121–160 and 473–502.

The DIS 2014 pictorials are: Lorenzo Davoli and Johan Redström. Materializing infrastructures for participatory hacking; James Pierce and Eric Paulos. Some variations on a counterfunctional digital camera; Stephan Wensveen, Oscar Tomico, Martijn ten Bhömer, and Kristi Kuusk. Growth plan for an inspirational test-bed of smart textile services; Ron Wakkary, Audrey Desjardins, William Odom, Sabrina Hauser, and Leila Aflatoony. Eclipse: eliciting the subjective qualities of public places; Elisa Giaccardi, Elvin Karana, Holly Robbins, and Patrizia D'Olivo. Growing traces on objects of daily use: a product design perspective for HCI; Michael Shorter, Jon Rogers, and John McGhee. Practical notes on paper circuits; Eli Blevis. Stillness and motion, meaning and form; Diego Trujillo-Pisanty, Abigail Durrant, Sarah Martindale, Stuart James, and John Collomosse. Admixed portrait: reflections on being online as a new parent; William Odom, John Zimmerman, Jodi Forlizzi, Hajin Choi, Stephanie Meier, and Angela Park. Unpacking the thinking and making behind a user enactments project.

ABOUT THE CURATORS

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⬥ **Will Odom** is a Banting Fellow in the School of Interactive Arts + Technology at Simon Fraser University. He likes photographs and dogs.

1A

These two images were contributed by Liliana Ovalle (Interaction Design Research Studio, Goldsmith's, London), used here with permission. The soft organic forms of the prototype sketches in 1A take shape as Dieter Rams-inspired physical prototypes in 1B. The sketches in 1A are exercises in embodiment during the development of the Energy Babble audio device. The forms in 1B are prototypes exploring different aesthetics during the development of the Energy Babble audio device. As a post-hoc reflective observation on the part of the curators of this article, one could note that the forms in 1B appear to be artfully arranged as in a cubist landscape, in both the pastel color palette and primary shapes. Here, the images play the roles of *record of making* and *record of inspiration of form*.
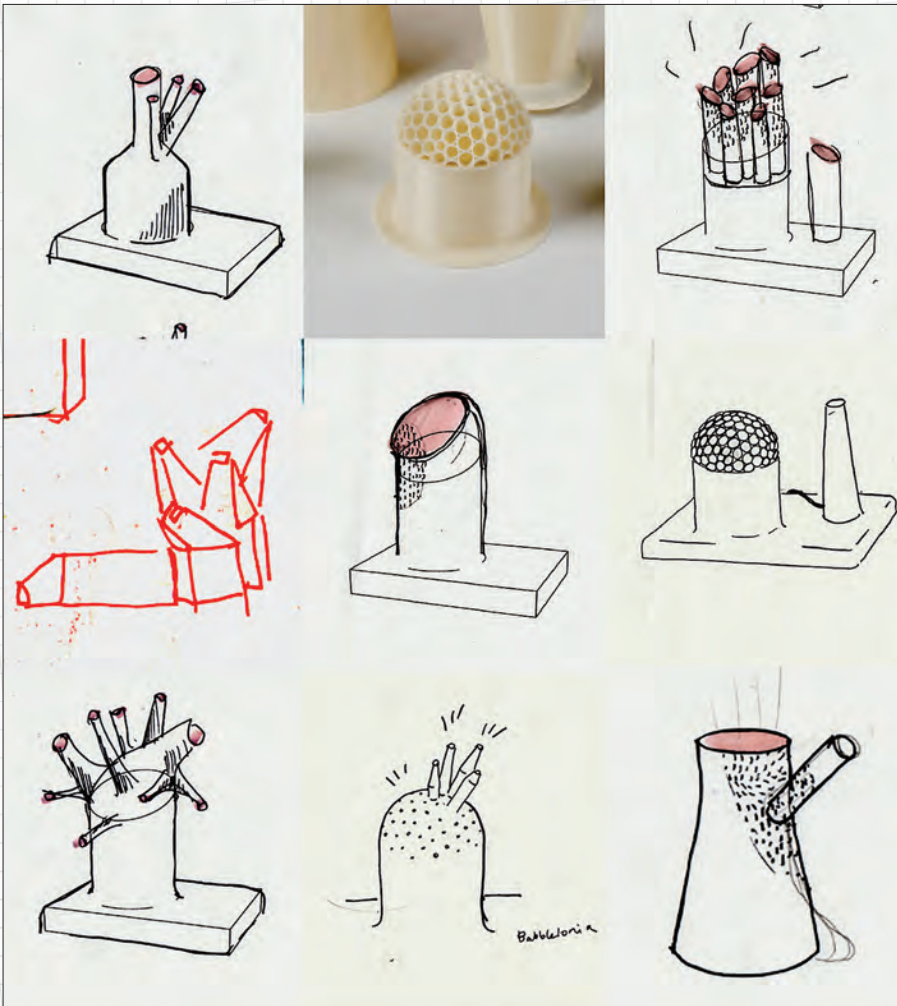
1B

2A

2B

2

Image 2A. Portraits of people and their dogs.

Image 2B. Flat-coated retriever society of America.

The triptych in image 2A by Max Mollon (PSL Research University, Paris) shows three dog owners interacting with their dogs of various breeds in very similar living-room contexts and poses, with soft indoor lighting. The images are a reflection on different human-canine communication styles for a project to design for interactivity between dogs and humans. As surreal as these portraits and their serendipitous notions of interactivity are, image 2B (photographer unknown) is even more surreal. It shows curator Sabrina Hauser (SFU, Vancouver) with her dog, who is receiving an award "First Place 7–9 Years Bitch" at a dog show. The deliberate poses and seemingly amateur bright flash add to the surrealism. Here, these images play the roles of *photo-ethnography both directly and indirectly as informant of interaction design* as well as *images as serendipitous, fun, or humorous inspiration for design*.

Image 3A. Portraits of craftspeople.

Image 3B. Handcraft Paper Museum, Tengchong Village.

These images by Haodan Tan (Indiana University Bloomington) show rural Chinese craftspeople engaged in culturally rich heritage craft (3A) and the Handcraft Paper Museum (3B), which makes these crafts available. The images serve the role of *ethnophotographic reflection on making*, interesting because the implications of craft orientations for interaction design are currently a matter of specific interest.
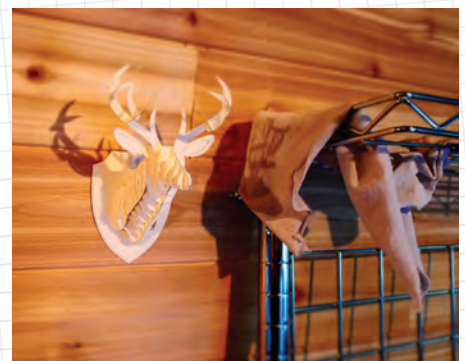

3A

3B

4

**Image 4.** Camper van prototype.

These images by Audrey Desjardins, Léandre Bérubé LeBrun, and Ron Wakkary (SFU, Vancouver) show a van that has been converted to a camper van. In the first image, the temporally mobile built artifact merges with and contrasts with the timeless, natural snow-covered landscape, at once both cold and warm. Before and after images show the van's transformation from a cold metal container to a warm wood-lined living space. With respect to interactivity, design images play the roles of *record of DIY culture* and *illustration of the synthesis of artisanal craft with technological affordance* (of the modern vehicle design).

Image 5. Stakeholder panoramas.

These images by Martijn ten Bhömer, Oscar Tomico, and Stephan Wensveen (TU/e, Eindhoven) show different stakeholder environments in the production of smart textiles and associated services. The panoramic technique and parallelism among the three environments are interesting photographically as a means of highlighting context rather than editorial focus. The roles of the images are *records of stakeholder environments* and *comparison of contexts*.
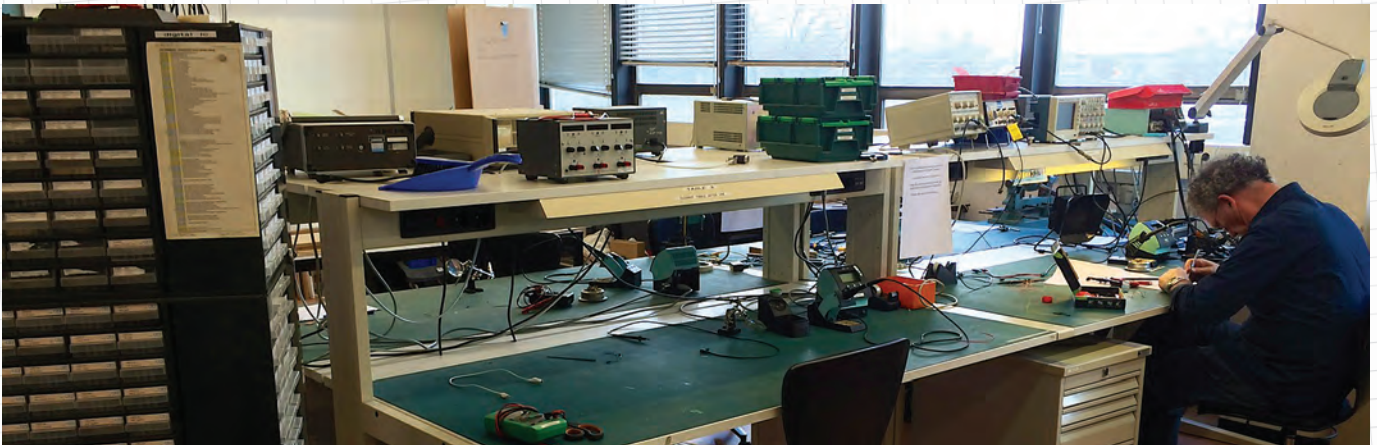
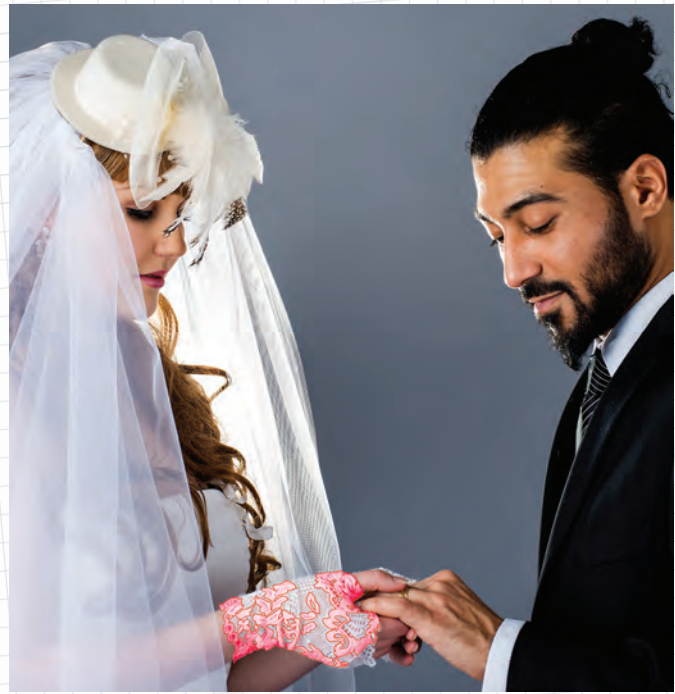Prototyping facilities of technology partner

Knitting facilities of textile producer

Social environment of service provider

6A

6B

Image 6A. Design sketching with high-quality photographs.

Image 6B. The photo studio as a material of design process.

These images by Nicholas True (Umeå University), Shad Gross (Indiana University Bloomington), and Daniel Fallman (Umeå University) show high-quality photography used as a basis for sketching the design—in this case—of wedding-ceremony wearable-technology fashion. 6A shows how the design details are highlighted by their contrast in realism with the photographic background that serves as context. 6B shows the production of these background images. The images serve the role of *a material in a technique of concept sketching*.

7 **Image 7. Remote presence prototypes.**

These images by Jackson McConnell (OCA, Toronto) photographically illustrate his designs for mechanisms of ambient awareness and presence based on sound, visual sculpture, light, video, and even smell (not pictured). The role of images in this work is *a record of prototyping concepts*.
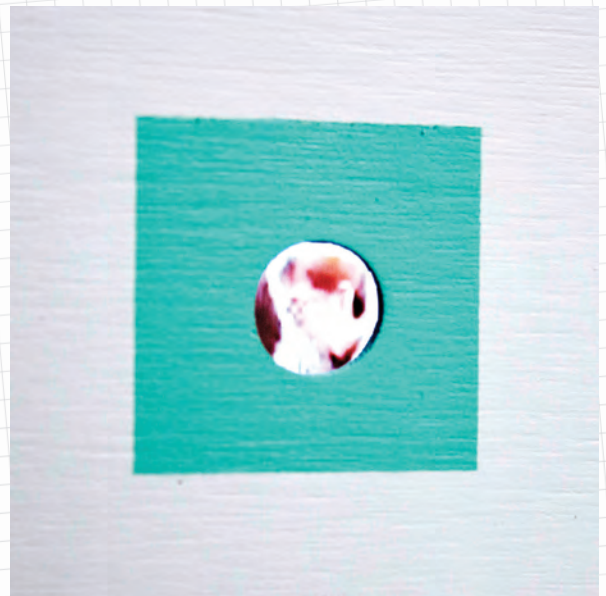
Quantum B

Media Mobile

Knock-Knock

Peep Show

This ennead of images by Ingrid Pohl (University of Technology Graz, Austria) and Lian Loke (University of Sydney) provide an inventory of material interactions. The images very economically show interactivity through the use of materials and the hands of a model. The role of the images here is as *inventory of design materiality*.

Soft

Warm

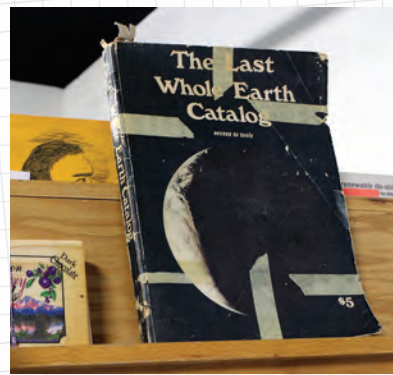Cold

Vibration

Shape Change

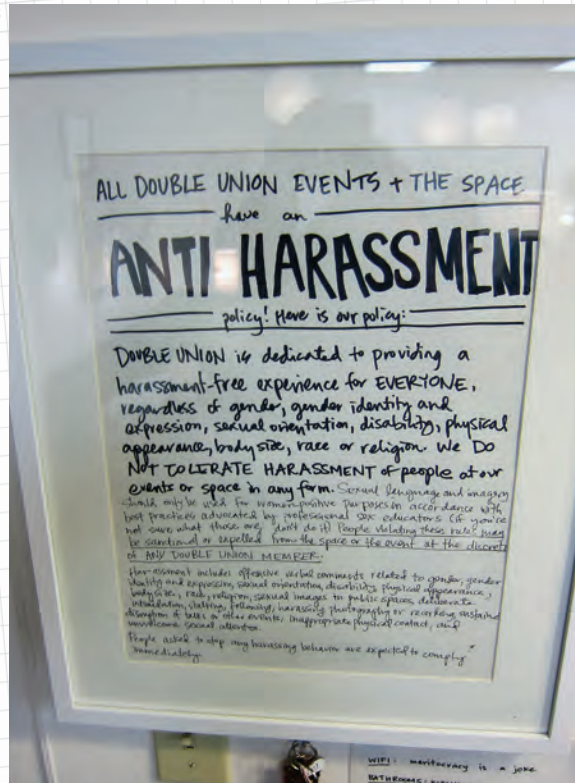Surface Roughness

Air Flow

Dynamic Movement

Water Flow

9A

9B

9 Image 9A. Scenes from feminist hackerspaces field research.

Image 9B. Anti-harassment policy in a feminist hackerspace.

Image 9A by Sarah Fox, Rachel Rose Ulgado, and Daniela Rosner (University of Washington, Seattle) and image 9B by Liz Henry chronicle the reading material in feminist hackerspaces in Portland, San Francisco, and Seattle. Here, the identities of the people who use these spaces are not in portraits, but rather in artifacts that tell a story about sociopolitical orientations. The images serve the role of *revealing identity through recording of context*.