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OF ART + DESIGN

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CURRENT IS A MULTI-PLATFORM DESIGN JOURNAL *that showcases creative, practice-based and applied research. It functions as a site for design researchers, academics, students, professional designers, entrepreneurs, and the business community to reflect on contemporary design thinking—products and processes.*

Through a variety of forms and formats—interviews, case-studies, critical essays, reviews and photo documentation, we challenge researchers to represent their processes as iterative cycles of research and to skillfully navigate information-led and practice-led methodologies.

Current is a continually evolving exposition on the people and processes involved in design research. It is a platform for the cross-disciplinary, cross-sector professional communities of people with educational and professional interests in the currency of design thinking.

Current has the following goals that reflect its unique location in one of Canada's most dynamic Art + Design universities:

- ▶ To illustrate the context that shapes practice-based research and research-based practice
- ▶ To illustrate new processes and design thinking from project-based collaborations with a diverse range of educational partners
- ▶ To inform about current and future directions in teaching, research, and learning in post-secondary education
- ▶ To showcase generative tools for co-designing and their benefits at the “fuzzy front end”
- ▶ To establish a transparent legacy of learning for undergraduate and graduate students, alumni,

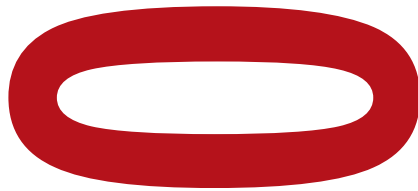
faculty, staff and administration through publication in print, online and as an iPad app

- ▶ To demonstrate to the business community the economic value of managing design as a resource

Current's affiliation with Emily Carr University of Art + Design is vital to the journal's function as a site for on-going dialogue between researchers in and across a variety of local, national, and international contexts—academic and professional. The university context is crucial to how we understand and illustrate a practice-based design ethos in relation to an evolving ecology. Our learning community is a research space rich in critical and collaborative inquiry and reflective self-practice. Research at Emily Carr is modeled on context-informed practice in a teaching/research nexus that is responsive to human and ecological needs.

Current draws its power from a community of educators, practitioners, students, and staff engaged in new models and networks of innovation with educational partners from diverse sectors. We are explorers of the values and richness of human knowledge and agents of change and cross-disciplinary integration. A community of thinkers and makers, we seek to engage with complex ideas, situations and in so doing to speak to teams of experts, as well as to the very people who use our research outcomes.





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ON THE CONVERGENCE OF ETHNOGRAPHY AND DESIGN / DAVID BOGEN

OVER THE PAST TWO DECADES, *designers of all stripes have begun integrating the lessons of ethnography into their academic research and professional practices. Under the rubrics of “reflexive,”*^[1] *“participatory,”*^[2] *“human-centred,”*^[3] *“contextual,”*^[4] *and “transformation design,”*^[5] *the relationship between design studies and ethnographic approaches to cultural analysis has been progressively deepened and, at the same time, grown more complex.*

During this same period, key developments in anthropology, sociology, and studies of material and technological culture have transformed our understanding of both the context and the subject matter of ethnographic investigations. These developments include: The critique of the colonial history of anthropology and the rise of relational and reflexive approaches to ethnography^[6]; the emergence of studies of contemporary work and expert practice as a distinctive area of ethnographic inquiry^[7]; and the rise of Science and Technology Studies (STS) as an interdisciplinary field that attends, among other things, to the complex relations between “human” and “non-human actors.”^[8]

Given these developments, there are strong grounds for claiming that design studies and ethnographically-informed studies of culture, human systems and technical practice have, for some time now, been on a steady path of convergence, and indeed, are now running on parallel tracks. (IMAGE 1)

It is now commonplace for professional design associations to advocate for the incorporation of ethnographic skills and cultural awareness as part of design curricula. So, for example, the 2009 National Architectural Accrediting Board (NAAB) standards for student educational outcomes establish criteria for “Critical Thinking and Representation” that include the development of skills and applied research strategies for “comprehending people, place, and context” across a range of cultures and cultural settings.^[9] AIGA—one

of the major professional design associations in North America—has recently produced an “Ethnography Primer” as a resource for working professionals.^[10] In the introduction to this document, the authors state: “Designers need to understand the relationship between what they produce and the meaning their product has for others” and “ethnography informs design by revealing a deep understanding of people and how they make sense of their world.” The cover image for the “Primer” (IMAGE 2) makes a visual argument for a dialogical relationship between ethnography and design.

At the same time, the version of ethnography and ethnographic methods outlined in the “Primer” are necessarily rather thin and utilitarian: Designers need to understand the complex human and cultural contexts, the meanings, and the implications of their proposed designs, but—faced with the demands of client specifications, project deadlines, limited budgets, etc.—these understandings need to be arrived at in ways that are relatively expedient and tuned to the problems designers are working on directly. As a practical matter, the recommendation of the “Primer” appears to be that it is worth bringing an ethnographer onto the team at some point, where the role of the designer is to develop a brief that focuses the trajectory of ethnographic analysis in ways that advance the project narrative and have demonstrated relevance to the design solution(s).

Installation by Kota Ezawa displayed by the Vancouver Art Gallery at an offsite location on West Georgia Street between Thurlow and Bute.



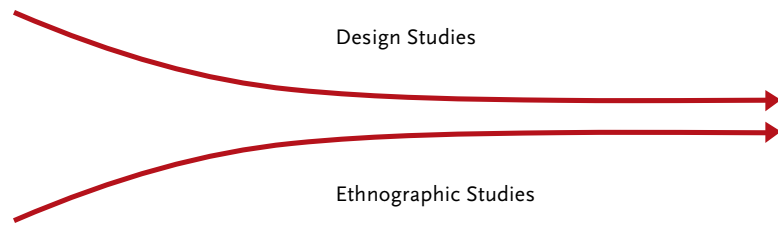


IMAGE 1 / Design studies and ethnographically-informed studies of culture have been on a path of convergence and now continue to run on parallel tracks.

“...there are strong grounds for claiming that ethnographic studies of culture, systems, and technical practice are, in fact, intrinsic to design.”

My aim in this essay is to demonstrate that this “thin” version is inadequate for understanding the appropriate place of ethnographic research in design education as well as the relevance of cultural analysis to the actual issues and problems that designers face in their daily practice. My central argument is that—whether or not they are academically trained in ethnographic research—all designers are “implicit ethnographers” in the sense that they routinely employ methods of cultural analysis and documentation in ways that inform the design process, often in unseen ways.

Rather than conceiving ethnography as a set of expert methods that are somehow separate from design, I wish to claim that these methods are always already present in the design process. As a consequence, I want to advocate on behalf of a fully integrated—or “thick”^[1]—conception of the relationship between ethnography and design in which the ongoing cultivation of our capacities for cultural analysis and ethnographic understanding is a core element in the education and practice of all designers.

In short, rather than merely being two fields running on parallel tracks, I aim to demonstrate that there are strong grounds for claiming that ethnographic studies of culture, systems, and technical practice are, in fact, intrinsic to design.

(IMAGE 3)

WE ARE ALL ETHNOGRAPHERS /

By saying all designers are “implicit ethnographers” I do not mean to imply that designers are alone in paying attention to the cultural context of their work. On the contrary, the argument I am making is that “attending to cultural context” is a pervasive feature of any socially organized activity, where what I mean by “cultural context” is the local and immediate conditions of “just what we are up to” in some specific setting. How these local analyses and shared understandings are made available within the context of their production is a matter of rather complex, if familiar, ethnographic work. Here, an example will perhaps be helpful.

Games and game structures are a fairly universal feature of human societies. One general thing that can be said about game structures is that they consist minimally in a set of conventions that mark certain actions as part of the game and certain others as peripheral or irrelevant to the state of play. So, for instance, if I am playing chess and I move my pawn one square forward, that is a move in the game. If, alternatively, I move my coffee cup to my mouth, that is something I am doing “while playing chess,” but it is not part of the game, at least not directly so. Further, games have routine ways of beginning and ending, and within these, typical cycles of play (“moves” in chess, “innings” in baseball, etc.) Practically speaking, this means that—from a player’s perspective—a game consists in a kind of alternation between periods of intense focus on game relevant activities, punctuated by periods of more relaxed focus, disengagement, or rest. And typically these alternations between highly focused and relatively disengaged periods are well marked and monitored within the overall conduct of the game.

Take, for instance, the case of card games, and more specifically the game of bridge. Bridge is a game typically played by four people, with two people on each team. Team members sit across from one another on opposite sides of a square table. This physical design eliminates the ability of team members to see each other’s cards, but (interestingly) maximizes their ability to see each other’s bodies and facial expressions.

The play of bridge takes place in cycles, called “hands.” Once a hand begins, it is inappropriate for any player to say anything that would allow other players to know what cards they are holding or what they are thinking about in terms of their strategy of play. And, indeed, players monitor one another to ensure that no one gives away information unfairly, and a large part of the game of bridge is about being able to figure out what people have in their hands and what strategies they are following solely with reference to the bids they make and the cards they play.

It is in this sense that the mastery of the game of bridge consists in a very specific, context-sensitive form of cultural analysis: You need to understand the rules of the game, but you also need to understand how those rules play out in specific game situations and specific strategies,

and you need to be able to analyze the behavior of other players, as well as your own, relative to an understanding of both the rules of play and the social rules that constitute the larger social and material ecology of the game.

THE PROBLEM OF OTHER CULTURES /

From this example it can be seen that bridge players invoke close-order cultural analyses as part of their demonstrated mastery of the game. This notion can be extended to other games and other kinds of socially organized activities such that, we are all, in a sense, engaged in practices of cultural analysis all of the time as participants in the ongoing constitution and coordination of our lives together. The issue for designers—and, by extension, for all of us—is that each of us possesses different kinds of expertise and different areas of cultural mastery, and while it is interesting to deepen our understanding of those areas with which we are already familiar, our concern is also—perhaps predominantly—to understand the workings of cultures, settings and ecologies of action that are, in specific ways, different from our own.

The so-called “problem of other cultures” is perhaps the defining problematic of professional ethnography. In simplest form, it consists in the idea that cultures are relatively bounded systems and that the job of ethnography is to assist members of one culture to interpret and understand the practices and their meanings of another culture through the application of professional methods of ethnographic inquiry and analysis.

However, as Bourdieu has pointed out, cultures do not just sit there waiting to be understood, they come to the table with ready-made practices for self-representation. What he discusses as the special position of the “informant”—a person who is engaged by the ethnographer as representative of the larger cultural group—is one example of how conditions for cultural permeability and cross-cultural understanding are built into the local orders of practice that ethnographers are seeking to understand in the first place.^[12] The notion of expert “informants” is, of course, notoriously problematic insofar as different members of a cultural group occupy different positions and will have different versions of what they are up to, the meaning of their actions, and so on. The important point here, however, is that, in addition to what they are doing, people are all the time reflecting on and talking about what they are doing, and this

“discourse on practice that is built into practice” provides an indefinitely large resource for persons—such as ethnographers and other novices—who are trying to understand what the experts are up to in any given cultural group. Indeed, were it not the case that these kinds of resources are built into our ordinary structures of social activity it would be impossible for us to accomplish one of the central tasks of any culture: To transmit local knowledge and cultural practice to a next generation of members.

DISTRIBUTED COGNITION /

My aim in the foregoing has been to point out that the so-called “problem of other cultures” is not just an issue for ethnographers, it is an issue we all face as persons who, at different points in our lives, need to learn the language, practices, rules and sensibilities of unfamiliar cultural groups. We learn these things not just by asking people to tell us what they are up to, but by immersing ourselves in courses of practical activity—by doing things—and by engaging with others in constructing reflective accounts and understandings of what we have done. Although ethnographers have built important specialized knowledge around these practices of learning, in the end, these methods represent amplifications and refinements of practical methods of communication and analysis that are part of the rich and complex fabric of ordinary social life.

A further issue concerns the fact that not all members of a specific cultural or expert group share the same perspective, position, knowledge, etc., vis-à-vis the system of knowledge and practice we, as implicit ethnographers, are seeking to comprehend. The issue here is more than the simple fact that different members of a culture or area of expertise have different versions of what they are up to. In complex societies and organizations, different people occupy different roles or positions that require different sorts of specialized knowledge and practice.

In his book *Cognition in the Wild*, Edwin Hutchins provides a lengthy account of the steering of large ocean vessels (navy ships) as a highly complex achievement involving the coordination of many different people with very different kinds of technical expertise.^[13] Critical here is that no one person actually possesses all of the knowledge it takes to maneuver a ship. Rather, the ship

IMAGE 2 / AIGA's Ethnography Primer. This cover creates a visual argument between ethnography and design.

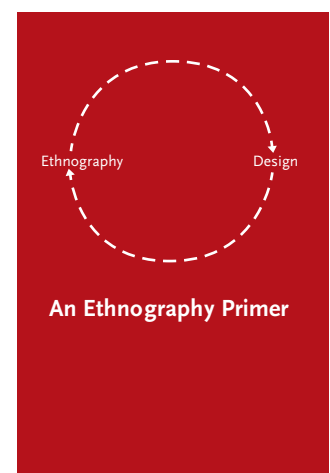




IMAGE 3 / Ethnographic studies of culture, systems, and technical practice are, in fact, a core element in the education and practice of all designers.

works as a kind of technological apparatus for coordinating and communicating the distributed knowledge and expertise of the crew such that they can collectively accomplish the tasks of steering and navigation.

The situation with a ship is not unlike other kinds of human organizations. Corporations, hospitals, universities, laboratories, municipal governments, and the rest, represent complex organizations that bring together persons of massively different skill sets and experience around common projects, physical and technological environments, and institutional identities. It is in this sense that any specific design—whether of a building, an artifact, a communication system, or a process—needs to address the conditions of its own embeddedness within this larger context of culturally distributed knowledge and expertise.

CONCLUSION /

My aim in this brief essay has been to give some initial sense of how cultural analysis is embedded in our routine social activities and to begin to imagine the implications this holds for ethnography, as well as for our understanding of the relationship between ethnography and design. My central argument has been that professional ethnography is, in its own right, a culturally embedded practice that draws upon

pre-existing resources for learning and cultural understanding that are always already present in the social settings and cultural practices ethnographers are seeking to comprehend. Further, I have argued that the relevance of ethnography for design consists at the very least in the ability of cultural analysis to draw attention to the depth and complexity of socially distributed knowledge and expertise in contemporary organizations, and, one might say, in contemporary social and cultural life.

As I was writing this essay, I attended a gathering organized by the City of Vancouver called the “Cities Summit,”^[14] where the mayor of Calgary, Naheed Nenshi, told a story about what he described as the “best investment in open technology” ever made by his administration. As one of their initiatives in open information government, the City of Calgary equipped every snow-plow truck with GPS and developed an application that would provide the locational data of all the plows to the city’s public website. Not only did this almost eliminate phone calls to the City to find out when the streets would be plowed, it changed the way that people organized their days and their traffic patterns in the aftermath of snowstorms.

Although not world-changing, it is an excellent example of how a specific technological intervention can be used to mobilize the massively distributed intelligence of a city and its citizens. It is well worth noting that this “design solution” did not come from the city planners or the IT people, it came from the maintenance department.

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IMPORTING A RESEARCH ETHICS MODEL INTO CREATIVE RESEARCH



/ LOIS KLASSEN, GLEN LOWRY & JULIE YORK

DEVELOPING A UNIVERSITY RESEARCH AGENDA *requires significant changes to the structure and specialization of an Art and Design institution; it also involves a radical transformation to the “art school” culture and overall mandate. When Emily Carr set out to establish a Research Ethics Board (REB) in 2006, it was responding to a condition of eligibility for funding from the tri-council of federal research agencies—the Social Sciences Humanities Research Council of Canada (SSHRC), Canadian Institutes of Health Research (CIHR), and the Natural Sciences and Engineering Research Council of Canada (NSERC). More than this, the development of an in-house REB has demonstrated how determined this eighty-seven year old institution has been at prioritizing a top-flight “research enterprise.”*^[1]

In a very short time, Emily Carr has had the enviable distinction of receiving research funding from each of SSHRC, CIHR, and NSERC. This has meant that the Emily Carr REB has had to work quickly and effectively to develop policies and approaches that are consistent with Emily Carr’s relatively unique multi-disciplinary, practice-driven and creativity-focused research culture. As a result, a key facet of the quasi-independent Emily Carr REB office has involved educating and supporting a new research culture. As faculty members have come to secure tri-council funding with increasing frequency, they often find themselves in the position of rethinking or revising creative practice to fit the exigencies of scholarly endeavour. Thus, the Emily Carr REB is tasked with building a structure for researchers and instructors that supports emergent as well as established participant research projects. The following principles have so far guided the work of the Emily Carr REB: “At the University, the purpose of ethics review of research involving human participants is guided by three principles: the protection of research participants, the protection of the Emily Carr of Art + Design community, and the education of those involved in research.”^[2]

Within the context of the art and design university, these three principles have come to take on something of a specialized meaning, particularly around questions of creative

practice and the exact meaning or definition of human participant research. Painting or photographing a portrait, creating an animation of harm reduction for drug use and addiction, or designing an open source website to share information from an NGO—all necessarily involve human subjects, but do they require REB review and approval? There is no simple answer to this question. The appropriate response has to do with the designation of “research” and the type of knowledge the project hopes to produce. While creative practitioners have learned to adopt the language of research and methodology to describe their own practice, the terminology may actually cause as much confusion as not when it comes to the definition of human subject research and the ethical responsibilities involved for academics.

Published in December of 2010, the second edition of the *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans* (TCPS2) emphasizes a broad approach to research ethics that articulates unique opportunities for practitioners and researchers in creative disciplines. Integrating these guidelines into Emily Carr’s research policies and practices has produced a vital context for the discussion and exploration of research ethics, across disciplines and faculties at the university. It could be argued that this productive dialogue results in part from the dialogic nature of the TCPS2. Distinct from



its 1998 predecessor, the TCPS2 attempts to emphasize the importance of flexibility and on-going review in a newly consolidated set of core principles and in its insistence on the “proportionate approach to research ethics review.”^[3] By consolidating the eight core principles of TCPS1 into three comprehensive statements—namely, the respect for persons, a concern for welfare, and the principle of justice—TCPS2 clearly outlines approaches to the ethical treatment of participants during research that are dynamic and adaptable.^[4] The revised guidelines are less dependent on the categories and classifications that have been the used to guide research practices and terminology in the past. “Respect for vulnerable persons,” for instance is no longer a unique principal but is now expected to be produced as a result of all three core principles. In other words, the TCPS2 appears to recognize the fluidity of power relations and the fact that all persons hold vulnerabilities; it suggests that concern for the welfare of others requires that researchers carefully assess the unique needs of participants within the context of their research goals and conditions. The inclusion of people in the research enterprise, regardless of their social vulnerabilities or institutional status—in such a way demonstrating the researchers’ recognition that research and knowledge can flow across formal academic boundaries,—would, in the spirit of TCPS2, be taken as a matter of social justice.

Similarly, the TCPS2 emphasizes a “proportionate approach to REB review.” Proportionate review suggests that REBs need to be responsive to the conditions in which they operate, as well as responsive to the balance of harm and benefit proposed in the research under review. A proportionate approach means that the REB will provide more scrutiny to projects that propose a greater level of potential risk than those which present no greater than

minimal risk to their participants. Both the consolidated principles and the proportionate approach require that the REB processes have on-going discussions with researchers and those who teach research methodologies. That communication needs to reach beyond regular reports and formal reviews.

In keeping with this spirit of dialogue, the Emily Carr REB has been working with the different faculties and faculty members to help articulate the unique requirements of creative practice research involving the participation of others. This involves an on-going consideration of the environment of creative research and key questions about ethics in participant research. We are invited to think about and debate how the Emily Carr REB process might be integrated into media practices like film, video, photography—areas of research and production with well-developed professional standards and practices of consent and permission, that may or may not coincide with other academic standards.

Industry standards and professional practice conventions exist to guide and sometimes govern how consent is negotiated in disciplines like filmmaking, journalism, photography, community art, and others. Emily Carr, like most art and design universities, offers professional practice courses and public projects courses that teach undergraduate students to formulate release documents that reflect various levels of involvement with participants. During the development of the Emily Carr REB, creative producers amongst the faculty have actively questioned the implications of integrating REB scrutiny into these varied practices. The debates swirl around central questions of concern in research and creative projects: Do all creative projects that involve people need to be reviewed by Emily Carr REB? Are art projects research projects or not? Do all members of the community participate in research just by definition of their involvement in the university?

“The Emily Carr REB has come to understand research as professional practice that intends to extend or build on existing knowledge...”

To this end, the Emily Carr REB has come to understand research as professional practice that intends to extend or build on existing knowledge through a disciplined inquiry or systematic investigation, and through the dissemination of findings. Members of the Emily Carr REB understand the significant overlap between academic research and what is alternatively referred to as creative practice and artistic inquiry. Not all artworks involving human subjects require REB approval. In Article 2.6 of the *Tri-Council Policy Statement: Ethical Conduct for Research Involving Human Subjects (TCPS2)* a distinction between creative practice and research is clearly articulated.

“Creative practice activities in and of themselves, do not require REB review. However, research that employs creative practice to obtain responses from participants that will be analyzed to answer a research question is subject to REB review.”^[4]

The TCPS2 application of this guideline expands on the designation of creative practice activities.

“Creative practice is a process through which an artist makes or interprets a work or works of arts. It may also include a study of the process of how a work of art is generated. Creative practice activities do not require REB review, but they should be governed by ethical practices established within the cultural sector.”^[4]

While the creative practice leading to the production of art works is significantly different from other forms of academic research, when it is undertaken under the auspices of the university, artists, designers, writers, and media makers are expected to adhere to the three core principles of TCPS2. Creative practitioners of art-based research, like others working in the university, are

expected to uphold Respect for Persons, Concern for Welfare, and Justice as guiding principles in their work. Creative practitioners are also bound by the ethical conventions and expectations of their cultural sector. This means that they are expected to conform to the standards of their discipline, particularly concerning how they achieve informed consent and permission from their participants, subjects, or collaborators.

This is an area of dynamic debate within Emily Carr, as it is at other arts-based research institutions and universities across the country. The Emily Carr REB in tandem with faculty and administration looks forward to participating in discussions with our counterparts in other universities and the Tri-council. These discussions are particularly useful to understand the implications of working with review models and standards that have developed in research settings that bear little resemblance to environment of creative inquiry that has developed here. To help enrich the debate, and to maintain a vibrant research culture across all disciplines at Emily Carr, it is important for creative practitioners who undertake work involving human subjects to self-identify their research aspirations and to interrogate the boundaries between their creative practices and the knowledge practices of other conventional modes of academic pursuit. Recognizing that the imported REB model is dependent upon a responsive and dialogic approach, the Emily Carr REB has so far been informed by the discussions amongst peer creative practitioners and researchers within the Emily Carr community. The Emily Carr REB is enthusiastic about its role in guiding and supporting this debate.

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[3] Panel on Research Ethics, “Highlights of TCPS2”, PDF, <http://www.pre.ethics.gc.ca/eng/policy-politique/initiatives/tcps2-eptc2/Default/> accessed January 16, 2012.

[4] The original 1998 edition of the TCPS listed the following eight core principles: “respect for human dignity”; “respect for free and informed consent”; “respect for vulnerable persons”; “respect for privacy and confidentiality”; “respect for justice and inclusiveness”; “balancing harms and benefits”; “minimizing harm”; and “maximizing benefit”.

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USING VERTICALITY

/ BOBBI KYLE & NICK NG

URBAN DESIGN, SPACE PLANNING
INTERIOR ARCHITECTURE, SMALL LIVING SPACE
HABITAT, MODULAR DESIGN, HYBRID FURNITURE
MICRO-LIVING, 90 SQUARE FOOT LIVING SPACE
VERTICAL DESIGN

THIS ARTICLE EXPLORES AND ELUCIDATES THE PROBLEMS AND PROCESSES *involved in conceptualizing interior architecture for single-room micro-dwellings in urban Vancouver as part of the Ninety Square Foot Space project at Emily Carr University of Art + Design. Solutions were developed based off of existing, client-built nine by ten foot rental spaces in downtown Vancouver. We focused our efforts on problem definition and re-framing, and identified the multiple stakeholders involved and their differing interests, in order to discern a feasible intersection within which to design. The intent of this project was to reconcile the issue of adding the basic furniture required for practical living (bed, couch, desk/table) while retaining ninety square feet of usable space. The resulting prototype seeks to offer a design solution that may be utilized in future rental developments as a means of increasing the number of affordable, small-space living environments in urban centres.*

INTRODUCTION /

Vancouver is home to a wide variety of inhabitants including locals, tourists, students, business people, and working class people. The living spaces available in the downtown core often remain inaccessible to students and working class people due to the economics of the area. Our client, Instafund, is targeting this gap in partnership with Emily Carr students to retrofit existing, single-room accommodations with furniture installations that will better use these spaces to meet the needs of lower-to-middle income inhabitants.

Third-year design students working in teams of three were challenged to develop full-scale prototypes of built-in (non-removable) furniture or architecture. The resulting design had to meet the needs of not only the client, but also the intended target user. If successful in the eyes of the client, the system may be implemented in two existing locations owned by the client, thereby refitting a total of 150 one-room tenancy facilities with the newly redesigned furniture or architecture.

DEFINING THE PROBLEM /

As these redesigned spaces must fit within the rental system in place, our team adopted Susan Squires' concept of "uncover[ing] and understand[ing] the cultural system that frames human action to provide direction for creating" our proposed solution. This meant identifying and understanding the multiple stakeholders (or different interest groups) involved in the

system through the use of discovery research. These primary interest groups can be identified as follows: the property owner (client), tenants (users), and contractors/maintainers (secondary users). (IMAGE 1)

Preliminary research revealed that each interest group possesses its own unique set of problems and needs; as Richard Buchanan states, the "designer's task is to identify those conditions precisely and then calculate a solution." The challenge involved in formulating a solution for these distinct groups is that the interests of each do not entirely correspond. Through our research however, we were able to identify some of the issues that were common to each group. These commonalities included the square footage of the spaces, the feasibility and usability for all parties involved, the efficiency of the space and materials used, and the cost for all parties.

DESIGN CONSTRAINTS PROVIDED /

There were several constraints placed on our design team by the client during project initiation. These constraints included that the design:

- ▶ Could not exceed a \$1000 fixed budget
- ▶ Must be configurable for different rooms
- ▶ Should be able to be produced in multiples
- ▶ Needs to leave space for a mini-fridge and a bed (with the mattress being provided by the tenant)

- ▶ Will ideally increase the length of tenant stay
- ▶ Should discourage multiple occupancy (the spaces are intended for single occupancy only)
- ▶ Should discourage conventional cooking (space is not zoned for stoves or hot plates)
- ▶ Materials and manufacturing should remain as sustainable as possible, thus excluding MDF composite wood

RESEARCH AND METHODOLOGY /

Target user research

The research and discovery conducted by our team was completed in several different phases. We were provided with a set of interests and constraints from the vantage point of the client, but we lacked insight about the situation, needs and desires of the target users (tenants).

To gather this data we employed the following research steps and methods:

- ▶ Conducted a site visit to observe living situations
- ▶ Photo documented the space and its surroundings
- ▶ Established user profile and target audience information
- ▶ Conducted a tenant survey to gather opinions
- ▶ Utilized a co-creation kit (a creative kit that enables the user to answer simple but insightful questions in a tacit and visual way)
- ▶ Constructed a scale replica of the ninety square foot problem-space to examine the relevant issues in context
- ▶ Conducted “day-in-the-life” walk-through studies to glean information about how the space is moved through and used on a daily basis
- ▶ Established a needs vs. wants framework analysis
- ▶ Constructed scale mock-ups of the objects that must exist within the space (bed, fridge, etc.) in order to account for their presence in the space

Important observations made during the discovery process began with the realization that when conventionally sized furniture is brought into the space, it often creates additional problems rather than viable solutions. The rooms began to look

disorganized and cluttered, despite our best efforts. Many furniture items introduced into the spaces were discarded or left behind for the landlord or site management to dispose of at the end of the tenancy. We also noted that vertical space was never really used in any creative or meaningful way, with most space existing above eye level remaining unused and ignored. We considered this neglected space to be valuable real estate in terms of space planning.

Inspirational and existing product research

We considered a plethora of influences during the ideation phase of our development to inspire our design. Some of these sources included existing small-space living solutions such as yacht/boat cabins, recreational vehicles, train cabins, submarine facilities, and bus interiors. These examples of space management proved helpful, but did not lend well to a sense of permanence in the space.

Influence was also drawn by looking at urban centres in other countries such as New York and Hong Kong for existing examples of compact living. Most examples found possessed a considerably larger budget than what was currently allotted, and therefore proved non-viable on a limited budget. Other examples of small-space furniture included hybridized furniture, which strives to combine articles such as a couch and bed.

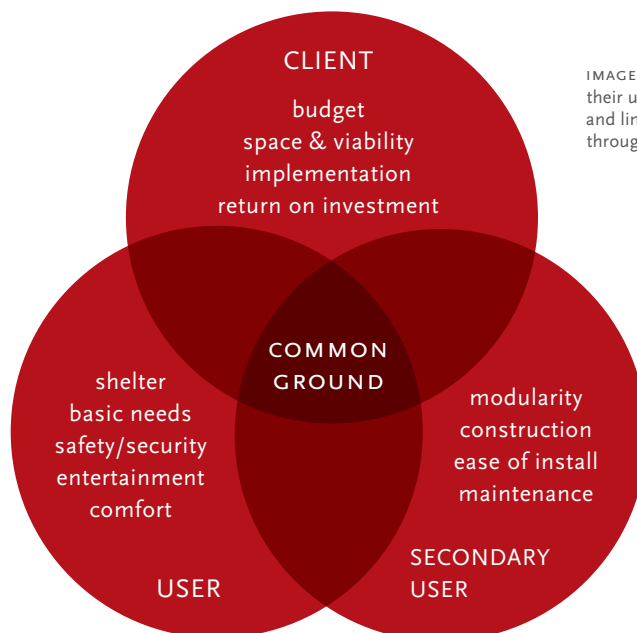


IMAGE 1 / Stakeholders and their unique set of needs and limitations are identified through discovery research.

“We considered a plethora of influences during the ideation phase of our development...yacht/boat cabins, recreational vehicles, train cabins, submarine facilities, and bus interiors.”

Most of these solutions contained “Murphy style” beds (beds that lie flat against—and fold out from—flat surfaces and walls). These hybrid solutions are attractive and work well, but still carry the problem of requiring a determinate amount of free floor space in which to fold the unit out. In this instance, the space allotted was too small to accommodate these solutions, and would require repetitive movement of objects to operate. They also require repetitive configuration of several different components by the user in order to be used in a practical way.

OUR DESIGN GOALS AND APPROACH /

Since, as noted by Buchanan, “constraints can best be visualized in terms of three overlapping criteria for successful ideas: [feasibility, viability, and desirability],” we narrowed our design criteria even further in order to conceive of a feasible, viable and desirable solution. Following user and existing-product research, our team identified a new set of refined design goals in addition to those provided by the client that we felt would strongly address the problem sets we prioritized. These new, internally generated goals were as follows:

- ▶ Find a way to retain the ninety square feet of space
- ▶ Use the vertical space more efficiently
- ▶ Meet the users’ basic needs and add amenities and comforts wherever possible
- ▶ Make the design emotionally durable (foster an emotional attachment and give a sense of permanence rather than disposability)
- ▶ Make most of the elements static in order to reduce the feeling of transience as well

as to reduce the amount of effort needed to configure the space

- ▶ Allow space for alternate cooking and food preparation methods
- ▶ Reduce or control the mattress size to a long twin
- ▶ To create a comfortable and inviting living space

THE RESULTING APPROACH AND CONCEPT /

To adhere to our now streamlined framework, our group attempted to empathize with each of the three main interest groups. This allowed us to make further decisions about material types, costs, construction, modularity and aesthetic qualities. By identifying with and assuming these three roles, our design team was able to avoid imparting too much of our own social, cultural and aesthetic preferences.

Our final concept iteration includes a platform surface directly above an extra-long twin-sized mattress and bed frame. The goal of this platform is to permit the bed to nest underneath when not in use, to enable the bed to be wheeled out half way and locked in place to convert into a couch or lounge, and to allow the bed to be pulled out all the way from underneath the platform for sleeping. (IMAGE 2) A combination counter/desk surface is placed on the platform above the bed, overlooking the rest of the space, to serve as a sitting, eating or working space. (IMAGE 3)

This platform elevation enables us to solve several problems at once:

- ▶ It provides a sitting, sleeping, eating, studying and working space together in one unit



IMAGE 2 / This flexible system allows for the bed component to be pulled out from underneath the platform to serve as either seating space or for sleeping.

- ▶ It downsizes at once the main living components to an acceptable scale for smaller spaces
- ▶ It accommodates the largest piece of furniture required in the space without reducing the square footage
- ▶ It effectively uses verticality, and needs only a small stepping stool for access
- ▶ It creates additional storage nested along the sides of the platform, thereby reducing the need for additional furniture
- ▶ It functions as interior architecture rather than removable furniture
- ▶ Its solidity and attached relationship to the space gives it a clear sense of permanence
- ▶ It is an enduring object that can be customized by simple colour and accessory choices or modifications
- ▶ The main components cannot be lost or stolen
- ▶ It can be constructed on site with locally sourced materials, and repaired and maintained as needed

OUTCOMES /

Undeniably, the greatest hurdle encountered during our design process was the mediation of different interests. Traversing these differences required careful consideration and compromise throughout the problem-solving process. During this time we drew much inspiration from Donald Schön:

“Designing is a social process. In every building project, there are many different kinds of participants. [these individuals] pursue different interests, see things in different ways, and even speak different languages. [Any] theory of design worth its salt must somehow take into account all of these tensions.”

We feel confident that the final prototype takes into account these tensions as identified during the design discovery process. Although the concept could be pushed further (given more time or a larger budget), we feel that the solution is certainly “worth its salt.”

In conclusion, our prototype was developed with less than five hundred dollars worth of locally-sourced materials. The design is configured for simple on-site construction and can be reproduced by contractors without



IMAGE 3 / Using verticality in small living spaces conserves space while reducing the need for additional furniture.

any specialized training. The floor space has been effectively cleared for users to move through comfortably, leaving ample room for additional amenities. Most importantly, the space successfully fosters a greater sense of emotional engagement and permanence. Furthermore, we hope that our strategy can be used in future housing developments to increase the number of affordable, micro-living environments in other urban centres.

ACKNOWLEDGMENTS

We would like to thank Karla Tull-Esterbrook, our third teammate for being an insightful and invaluable partner in this project. We also wish to thank the client, our investors and our design instructor, Christian Blyt, for his expertise and support in developing the concept. We greatly appreciate the opportunity to design for such a dynamic problem space. We would also like to extend thanks to the University’s staff and shop technicians for aiding and facilitating our design process, as well as our classmates for providing valuable feedback.

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HEALTH & WELLBEING

JONATHAN AITKEN / YOUTH IN TRANSITION
JESSICA CARSON / THE LIONS GATE HOSPITAL FOYER PROJECT

Hospital beds in a training room at the Lions Gate Hospital.

INTRODUCTION / HEALTH DESIGN LAB

THE HEALTH DESIGN LAB (HDL) is a vibrant research cluster at Emily Carr. It is a virtual lab, in the sense that no dedicated research facilities are involved. Rather, it is an intellectual “home” for design faculty and students engaged in applied research projects in the general area of healthcare. Of course, this is a broad area of practice that spans all the design streams; it started at least 15 years ago with a long-term collaboration on assistive devices with the GF Strong Rehabilitation Centre.

At present, from Industrial Design we see projects from a wood product design course that include an elegant birthing stool for use in a delivery room, as well as a thesis project of an intelligent chair for a dementia unit that recognizes the occupant and plays a cloud based culturally appropriate play list.

Communication designers are working on the design of a patient portal for BC Children’s Hospital, and on an iPad-based application with social media components that allow young patients with chronic illnesses to manage their diseases more effectively. Interaction designers are interested in data visualization for the outputs of numerical simulations of emergency room queuing, and on the interaction tools needed by nurses during shift change on a busy ward. Much of the work has an architectural element. For example a recent research question involved the entrance foyer of Lions Gate hospital; how could it be re-designed to incorporate the changing needs of the patient and family population, and how could stakeholders be engaged in that re-design.

While the work is varied, some central themes are clear. First, faculty and student research is highly applied. Design solutions are sought for problems that are important to the healthcare sector, which can lead to improved patient outcomes, and where practical implementation is possible in the near term. Second, the work is highly collaborative. Almost all the

work involves the active participation of local clinicians and other caregivers, of local hospitals and other care facilities, and of local companies and other research partners. Through this model, “design thinking” is introduced to a system that is in need of innovation, while students learn to develop their design skills in real-world situations.

The work at the Health Design Lab is an example of design-based research, and research-based design. Researchers approach complex problems with a broad view that attempts to capture complexity, to understand previous approaches, and to linearize problems where possible. The work always involves co-design with those intended to benefit from the outcomes, and those intended to implement the solutions. It takes an inclusive view of product/process life cycle, considering manufacturability, cost, training and maintenance, and sustainability issues. As with any research, process is documented and reported to ensure others can benefit from results.

Certainly, “design thinking” will not solve all problems in the health care system. But equally certainly, this approach and this vibrant research cluster in particular, is contributing practical solutions that have real value in terms of patient outcomes and other important improvements.

/ ROB INKSTER

YOUTH IN TRANSITION

/JONATHAN AITKEN

A 3RD YEAR COMMUNICATION DESIGN CLASS considered the problem of youth with chronic illness transitioning from child-centred to adult-centred healthcare. Current systems have focused on paper or web-based education and information recording, but compliance rates are low. In conjunction with the British Columbia Children's Hospital the class conducted primary and secondary research and proposed solutions.

CONTEXT /

Children with chronic illnesses are well cared for in British Columbia; they receive excellent care at the British Columbia Children's Hospital (BCCH) in Vancouver. Children, however, are not necessarily well equipped to make the transition from child-centred to adult-centred healthcare. As children, they have access to many supportive environments; adults are responsible for their care. As adults, they are expected to manage this care on their own—a task for which many have not been adequately prepared. Various initiatives are in place to ease this transition, but none are completely satisfactory. Much of the materials are print-based, with many charts and tables that need to be completed by the youth. Some of the materials seem designed for a younger or older audience. None of it seems to “fit” today's 18 year old. Other initiatives are online-based, but they too have had only partial “buy-in” from youth. Representatives from the BCCH approached me in the summer of 2011 with the goal of considering this problem from a communication design perspective. I agreed to offer it as a major research project for my 3rd year communication design class.

DESIGN PROBLEM /

The class was asked to consider the following problem: using any of the tools and techniques of design research discussed in this class or others, consider solutions to the problem described above. If you find that media preferences are fundamentally different

between youth and their caregivers, what media would you choose? To whom should your design be directed? Are you leading the group or following their preferences? If your research suggests that youth engagement is the problem, how could you change the design to effect that engagement? In other words, how will you ensure the “buy-in” from this demographic? This complex problem has no single simple solution; it has many conflicting perspectives and requirements. Decide how you would proceed to solve the problem.

METHODOLOGY /

Using a variety of techniques—primary and secondary research; co-creation; human-centred design; brainstorming; emotional probes; demographics; etcetera—students considered the problem. While access to youth with chronic illness in transition was limited, students did create co-creation toolkits and ethnographic probes. These were used with a more general population, so results will need testing and further research, but the process itself is valid and revealed many different possible design directions. These included: gaming metaphors in a web site to maximize usage and retention; expansion of health self-care education to the general population in high school; community-focused websites that facilitate the creation of support groups and communication with others with similar issues; parent-centred education; customizable iPad apps that facilitated self-care. Two of these directions are outlined below by student creators.

“Children [...] are not necessarily well equipped to make the transition from child-centred to adult-centred health care.”



IMAGE 1 / UConnect enables youth with chronic illness to gain independence and responsibility in the management of their illness through a user-controlled mobile app and social media site.

CASE STUDY 1 /

AUTHOR: Craig Fleisch

PROJECT TITLE: UConnect

PROJECT MEMBERS: Craig Fleisch, Saba Taghvai-Arabi, and Paul Rarick

Our team proposed that youth would be better able to manage their chronic illness and gain independence and responsibility for their own healthcare needs by incorporating their individual experiences with a user-controlled platform such as a mobile app or social media site.

To support our thesis, we looked through secondary research that focuses on the role of design research in healthcare and existing successful social media platforms. We also looked at the benefits and risks of social media in healthcare, and how it can engage and empower patients.

Our primary research included a cultural probe in the form of a survey. It consisted of a six-page interactive survey in PDF form. Thirty eight participants, ranging in age from 18 to 24, completed the survey. The results show that youth are constantly engaged with one another online; the majority of them have access to a laptop or smartphone. Ninety-seven percent are not satisfied with the current healthcare system, with two-thirds saying they would use a health-focused social media site. There is a clear demand for social media to play a role in healthcare.

Analysis of our primary and secondary research showed the tenability of our thesis and informed the final design. We created a health-focused social media website on a simple, easy-to-navigate platform.^(IMAGE 2) Key features include personal health biographies and a place to share similar experiences with either a

friends list or a forum-based online community. Users also had the option to control privacy settings, as well as search for health-related articles, research, treatments, symptoms, and conditions.

We chose to incorporate a web-based mobile app to complement the website. The app employs only a few key features of the website, including search options for symptoms, treatments, and conditions, as well as a messaging centre to get in touch with friends and healthcare professionals.^(IMAGE 1)

The core values of the website and app are patient engagement and empowerment. Therefore, we named our project *UConnect—A place to learn, share & grow*. Ideally, a health-focused app or social media site will act as a starting point for engaging individuals, and grow into a support network that can remain with them throughout their adult lives.

IMAGE 2 / UConnect web-based mobile app that complements the UConnect website in creating a space for patient engagement and empowerment.



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CASE STUDY 2 /

AUTHOR: Katherine Pihl

PROJECT TITLE: Pushing Independence

PROJECT MEMBERS: Katherine Pihl,
Natalie Straub, and Daisy Aylott

Our group proposed that children attending BCCH have difficulties transitioning to adult healthcare systems because they are not adequately prepared for adulthood. Our secondary research on parenting indicates that some parents, nicknamed “helicopter parents,” hover over their children, paying extremely close attention to them and their needs. Over time, these parents get involved in, and eventually take over, their children’s responsibilities.[1] Our group suggests that this “helicopter” behaviour has extended into the realm of healthcare, with parents making appointments for and attending medical sessions with their children. These children consequently become more reliant on their parents, as they are subconsciously aware that their parents will take care of them.

IMAGE 1 / A guidebook introduces parents to the components of Pushing Independence, a toolkit to help raise independent children.

According to Hara Estroff Marano and Lenora Skenazy, this overprotection occurs because parents are anxious about turning responsibilities over to their children, because they do not believe that their child will be able to handle it.[3] Jim Taylor suggests that if parents provide a variety of opportunities for their children to be independent, and if they address their children as if they are capable of completing these tasks, both parents and children will gain confidence in the children’s abilities.[4] Other studies support these parenting theories, demonstrating that in order to raise self-reliant children, parents need to be both flexible and demanding.[2] Drawing from this research, we proposed to educate parents by providing them with a toolkit to help raise independent children.

This toolkit, named Pushing Independence, consists of four components that guide parents through various family-oriented activities that will facilitate independence in their children.

The first element of our toolkit, a guidebook, (IMAGE 1) describes how our toolkit can help parents, and explains how to use the different components of Pushing Independence.

The second component is advice cards. (IMAGE 2) These postcard-sized cards are categorized into three age groups, 12, 14, and 17, which are then divided into three themes: school, home, and health. The front of the cards show for whom the tips are applicable, and the back of the cards list helpful suggestions and explanations of what goals the tips aim to achieve. The advice suggests activities that centre on two goals: providing opportunities for the child to act independently and facilitating connection and conversation between parents and children.

The third component is “ASK” cards that help facilitate conversations between family members. (IMAGE 2) These small cards are divided into two categories: “ASK your child” and “ASK your parent.” A child will grab an “ask your parent” card and vice versa, and ask the question written on the back of the card. These questions revolve around independence and provide an opportunity for parents and children to openly and specifically discuss independence.





IMAGE 2 / Pushing Independence toolkit includes a set of ask cards that facilitate dialogue between children and their parents as well as calendars that encourage children to write their activities and plans.

“What media would you choose? To whom should your design be directed? Are you leading the group or following their preferences?”

For the last component of our toolkit, we included a few calendars. By encouraging the child to write down their future plans, their daily activities, or even whether they took their medication that day, the calendars will help the child to be more organized and responsible. Since we only provided a few calendars, we hope that parents will purchase or make their own calendars.

We hope that with further development, our toolkit will encourage parents to raise their children independently, easing their transition

from youth to adult-centred healthcare. We have not covered the problem of what parents should do if their child is reluctant to engage with them or the suggested activities. We did not consider how to get a child interested in being independent or interested in their healthcare.

Our aim, however, was to create step-by-step advice for raising independent children, which we have achieved; further research and development will improve the outcomes of our toolkit.

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THE LIONS GATE HOSPITAL FOYER PROJECT / JESSICA CARSON

HUMAN-CENTERED, PARTICIPATORY
ETHNOGRAPHY, ACTION RESEARCH
HEALTHCARE, DESIGN, ARCHITECTURE

THE LIONS GATE HOSPITAL FOYER PROJECT *is a detailed example of how participatory, human-centred research can aid the design process and contribute to more effective solutions in architectural design. In this paper, I outline the unique research methods implemented by a research team of four students from Emily Carr over the course of the project. I also explain how the findings from this research led the team to make recommendations that, if implemented, have the potential to dramatically improve the functionality of the hospital.*

INTRODUCTION /

Vancouver Coastal Health (VCH) and Emily Carr University of Art + Design commissioned four design students to help identify opportunities related to the redesign and renovation of the Lions Gate Hospital (LGH) foyer space. Team leader and Industrial Design (ID) student Irene Schmid, along with ID students Jesse Mah and Solveig Johannesen, and Interaction Design student Jessica Carson. The team worked closely with IBI Group, the architecture firm that developed the master plan for the future reconstruction of Lions Gate Hospital. IBI has a history of incorporating participatory design research into their planning process. Using unique research methods to gather data, the Emily Carr team was able to generate detailed recommendations for IBI, VCH and LGH to consider for the interim renovation of the foyer space. The initial goal of the Emily Carr team was to determine the current functionality of the foyer space in order to make recommendations for improving it. We designed our custom research methods to analyze issues of way-finding, traffic flow, space allocation and service usage, while engaging hospital stakeholders in the process. The outcome was a design document that details the findings of four

months of research, intended to contribute to fundraising efforts for the hospital by effectively pinpointing areas of high priority for the renovation project.

PARTICIPATORY DESIGN PROCESS /

In order to achieve cohesive results, the Emily Carr team looked to innovative techniques including action and human-centred research. Cal Swann describes action research as a “... participatory activity where the researchers work in equitable collaboration... [and] the project proceeds through a spiral of cycles of planning, acting, observing and reflecting in a systematic and documented study.” The Emily Carr team aimed to do just that, while also looking to the professional field of design research for inspiration.

Many design firms incorporate human-centred research in the design process. For example, Frog Design, an interdisciplinary firm with experience in design research for a healthcare setting, self-describes their method as a three-step process: Discover, Design and Deliver.

During the Discover phase, intensive participatory research and strategic analysis

“We designed our custom research methods to analyze issues of way-finding, traffic flow, space allocation and service usage...”

allows designers to gain insight into and highlight opportunities presented by a particular problem. Results from the Discover phase provide usable data and credibility to the Design and Deliver phases.

The Emily Carr team worked with a similar system, creating methods for user engagement to generate usable data to be synthesized and analysed for design and delivery to the client, in this case Lions Gate Hospital, Vancouver Coastal Health and IBI Group. In “Healthcare Now,” Frog Design states that “the healthcare experience isn’t just about medical needs: it includes financial issues, personal goals, and daily behaviour. That’s why effective innovation starts by understanding people—both patients and professionals—and by considering how their needs can be met and aligned.” Through a series of research methods designed to engage the hospital community, including visitors, patients and staff, the Emily Carr team set out to understand the real needs of the Lions Gate Hospital foyer users.

RESEARCH METHODOLOGIES /

Participatory research methods can be customized to a given project. In the case of the LGH foyer renovation project, the Emily Carr team noted that a healthcare setting is particularly unique. When conducting research involving human participants, care must be taken to ensure that participants are not put at risk; receiving approval from the Emily Carr Research Ethics Board is a critical part of the process.

Upon approval, the Emily Carr team proceeded to carry out a series of custom research methods including ethnographic research, visioning sessions, space-related studies and an engagement session involving an interactive architectural model. Data gathered from multiple, participatory exercises designed around the research question allowed for cross-referencing and triangulation of information, allowing us to generate viable recommendations.

Ethnography

Spending time in the foyer space interviewing volunteers, visitors and staff allowed researchers to take note of the subtle interactions that occur in the space on a day-to-day basis. Observations and interview notes were carefully documented and made available to all team members using Google Docs, an online, file-sharing system. This rigorous observation tracking allowed the Emily Carr team to reference our notes and added another layer of depth to the findings generated in other exercises.

Quantitative data is also important to the research process; for the LGH project, the Emily Carr team conducted a survey over an eight-hour period, gathering 130 responses. (IMAGE 2) The survey questions were designed to investigate how participants used the space, definitions of user types (e.g. staff or visitor, first time or experienced) and what features and services were most used. The survey results, combined with statistics provided by the hospital cafeteria and the volunteer-run information desk, allowed the research team to create information graphics and visually outline how the space is currently used.

IMAGE 1 / The Emily Carr team conducts a visioning session exercise with LGH stakeholders to tap into their tacit knowledge of what a hospital should be like.



“The evolving diversity of human-centred research methodologies will undoubtedly propel the field of design forward,”

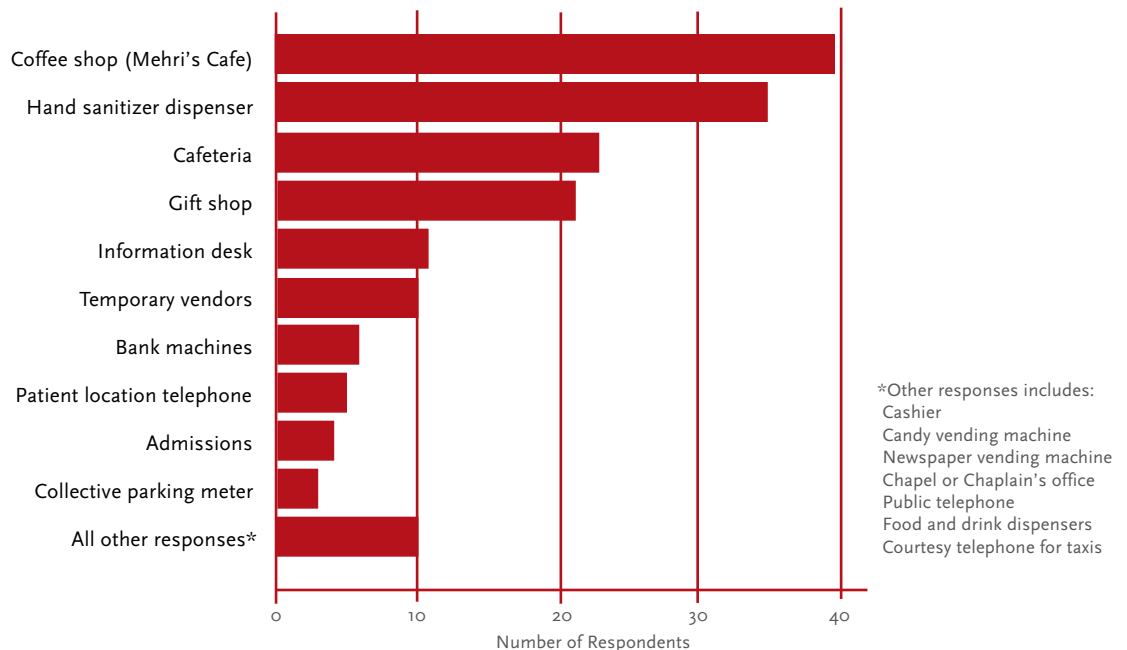


IMAGE 2 / A survey was designed to investigate the way the foyer space is used, estimate user categories and establish a hierarchy of uses.

Visioning Sessions

Visioning sessions were held twice with groups of LGH stakeholders. During the approximately two-hour long sessions, participants were asked to complete two exercises. In the first activity, participants were given a collection of 130 evocative images. (IMAGE 1)

They were asked, in some cases individually and in other cases working in groups, to select nine images from the collection that most represent what a hospital should be and to provide a word or phrase corresponding to each selected image. Results from this exercise gave the Emily Carr team visual clues as to colour palette and general feeling that most stakeholders find important in a healthcare setting. The second activity in the visioning sessions, the Post-it exercise, involved placing colour-coded Post-it notes on large-scale, wall-mounted panoramic images of the foyer space and surrounding outdoor areas. Orange Post-it notes represented negative elements within the space, green notes represent positive elements and blue notes represented elements necessary to the functioning of the space. Participants were also asked to write specific comments on each note they placed. This exercise generated a wealth of specific comments that overlapped extensively in both sessions.

Space study

Conducting video walk-through exercises with targeted participants highlighted key problems with way-finding and physical navigation in the foyer space. This exercise was carried out with multiple participants including those participants using wheelchairs, those over 65 years of age, and those who spoke English as a learnt language. Each participant was given a problem scenario, such as finding a patient on a particular floor, and had to attempt to carry it out. With cameras attached to their chests, participants narrated their experiences aloud, making comments when they encountered problems or when things were going smoothly. This observational narrative allowed the Emily Carr team to capture screen shots and commentary during relevant moments.

Five different entrances provide access to the foyer, and assumptions had been made about which entrances were used most often. To determine if the assumptions were correct, the Emily Carr team produced custom door counters using magnetic sensors and Arduino microprocessors and installed them over a four-day observational period. The data from the door counters produced interesting results, dispelling assumptions as well as providing insight on where to locate the information desk within the space.

Engagement Session

Our last participant-oriented exercise was an interactive architectural model activity. The engagement session was held in late October, and included a presentation of the team's findings based on research to that date. The model itself is a large-scale floor plan showing the hospital's current layout under a plexiglass sheet. (IMAGE 3) Colour-coded acrylic cubes represent the various services available, and can be moved around on the floor plan to create different space configurations. Dry-erase markers are used directly on the plexiglass to denote any desired custom re-working of the structure itself. This game environment allowed LGH stakeholders to contribute physical suggestions about how the space could potentially work better.

FINDINGS AND RECOMMENDATIONS /

By analyzing the findings of these various research methods, the Emily Carr team was able to make ten concise recommendations for the Lions Gate Hospital foyer renovation. Some examples of recommendations based on data analysis include:

- ▶ Ethnographic research combined with data from the door counters suggested suggests that re-locating Mehri's Place Café, the coffee shop in the foyer, should be a high priority in order to reduce congestion at the north entrance.

- ▶ Based on survey results and statistical analysis, the Emily Carr team concluded that certain service areas, including the gift shop and the cafeteria, could be reallocated to make better use of the space.

- ▶ Results from the nine images and Post-it exercises highlight the importance of incorporating a sense of community into the space.

- ▶ Feedback from volunteers at the information desk prompted the team to develop a new way-finding map for the information desk to hand out.

Because the nature of the research allowed for a high level of stakeholder engagement, the results and recommendations are likely to be well received. Not only that, but the findings can be conclusively verified with documented data and a comprehensive understanding of the specific needs of Lions Gate Hospital foyer users. This kit of methodologies can be applied to almost any design problem, and is of particular use in architectural design. The evolving diversity of human-centred research methodologies will undoubtedly propel the field of design forward, allowing for improved communication with users and a higher quality of designed artifacts, systems and spaces.

ACKNOWLEDGEMENTS

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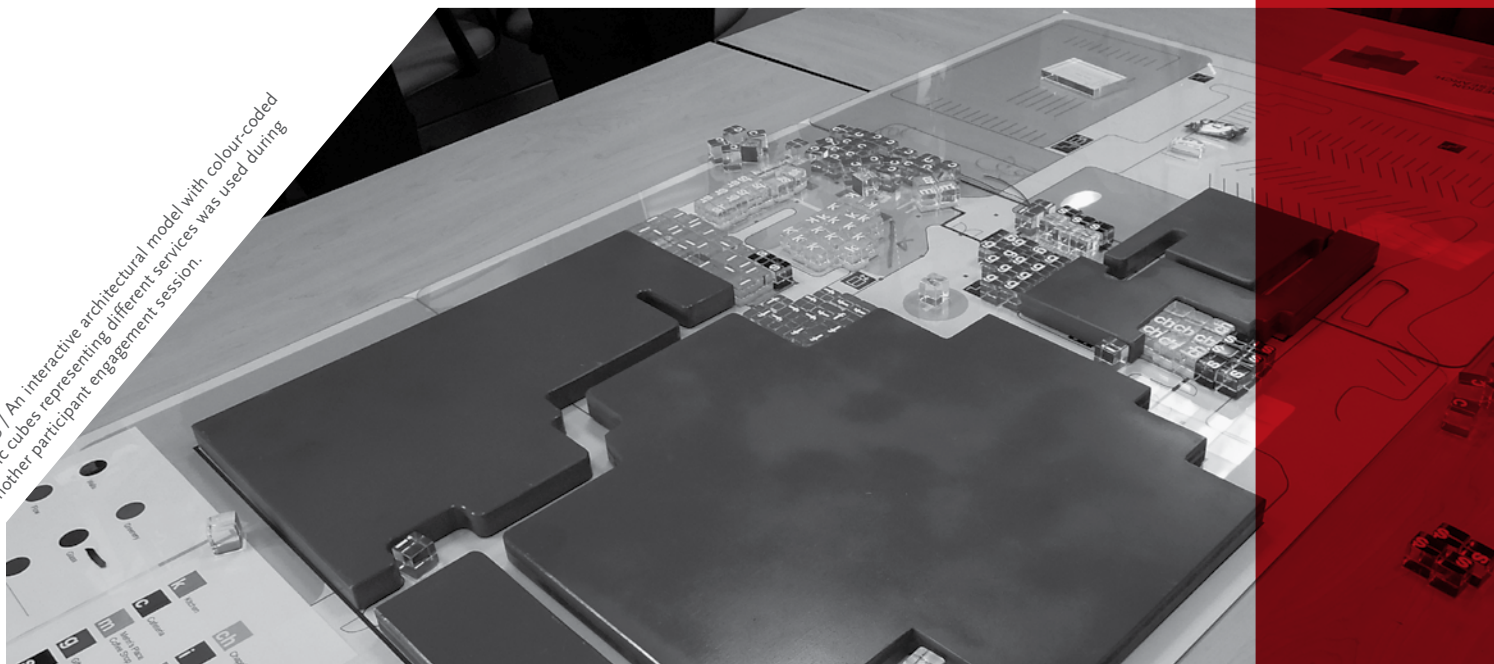
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IMAGE 3 / An interactive architectural model with colour-coded acrylic cubes representing different services was used during another participant engagement session.



INTERACTIVITY

CELESTE MARTIN / INTERVIEW WITH ALEXANDRA SAMUEL
VIVIAN ZIEREISEN & KENDRA STALDER / DESIGNING THE VIGNELLIS:
PROCESSES IN EBOOK PRODUCTION

Books go paperless and interactive on the iPad.

INTRODUCTION / SOCIAL + INTERACTIVE MEDIA CENTRE

THE SOCIAL + INTERACTIVE MEDIA CENTRE (SIM) helps BC companies tap the design, creative and technical expertise of Emily Carr faculty and students. Funded by a 5-year grant from the Natural Sciences and Engineering Research Council (NSERC), SIM supports a wide range of applied social, interactive and design projects. The Centre's research program engages BC companies as collaborators in uncovering new ways to use social technologies and tackle interactive design challenges.

The applied research capacity of the SIM Centre gives BC companies direct access to the innovative thinking, design skills and research expertise of BC's most creative faculty and students. Our partners span the technology and creative sectors, including everything from web and software developers to film publishing companies. SIM Centre projects have included:

For web developer Work at Play, testing the potential of their DEQQ social software tool by using it to support online conversations in an English class. The insights Work at Play got from this test helped them position DEQQ for its successful launch as the social platform for all the Canadian teams in the NHL.

For broadcast producer Paperny Films, developing the concept for a web and mobile app to support their Food Network Canada show, Eat Street, and connecting them with Vancouver's Invoke as a development partner. Together, Paperny and Invoke received significant funding from the Bell New Media Fund, and have made Eat Street one of the top Lifestyle apps on the Apple iOS app store.

For the web mavens at Mozilla, creating an ebook version of *Learning, Freedom & the Web*, a book about the future of learning and education. This enhanced ebook was designed

and largely built by Emily Carr students, with technical support from Steam Clock Software.

For web developers Affinity Bridge, partnering to build Participedia, an innovative research platform that convenes world leaders in the research and practice of deliberative democracy and democratic innovation.

For publishing startup BookRiff, developing a set of ebook prototypes that represent the eclectic possibilities for ebook ideation and design.

As the SIM Centre grows, publishing has emerged as one of our core areas of research. The advent of tablet computing has opened the doors to new kinds of books that integrate rich media, touchscreen interactivity, nonlinear storytelling and social interaction. Companies in a range of industries, including not only publishing but also software, film, and gaming, are moving toward ebooks as new medium for their work. But the creative and implementation challenges of creating enhanced books requires a diverse set of skills and expertise. Emily Carr's varied strengths, which run from print and interaction design to film and animation to illustration, are helping BC companies explore this new medium.

/ALEXANDRA SAMUEL

INTERVIEW WITH ALEXANDRA SAMUEL / CELESTE MARTIN

JANUARY 12, 2012 /

CELESTE MARTIN: We are here today with Alexandra Samuel, director of the Social and Interactive Media Centre (SIM) at Emily Carr. The SIM Centre has been engaged in eBook development in the last year through a wide range of projects involving design students and industry partners. How would you characterize Design's contribution to the future of the book?

ALEXANDRA SAMUEL: The whole idea of the book is breaking down because of this evolution from the printed codex to the digital book, first through e-readers like the Amazon Kindle and the Nook, and now with the advent of tablet devices, most notably the iPad. We are really opening up the possibility of what a book can be, and introducing all sorts of interactive elements, multimedia, and social elements that challenge our conventional notions of books. And once you start bringing in those kinds of media elements and those design possibilities the design of the book becomes so much more than just font selection or layout and becomes really part of the way a book is conceived, developed and even written.

CM: Can you illuminate us a bit on the ebook ecology? Who are the major stakeholders and what do you see them gaining access to?

AS: Sure. To create an enhanced ebook you need a much wider range of expertise than what it takes to publish a traditional book. With a tablet book you are starting to blur the lines between book and app, so the team of people it takes to create a title might include a software architect, a software developer, an interaction designer, a communication design team who are thinking about how the book will look but also how it will function. You may have various kinds of media artists; if you are incorporating video,

you might have a videographer, a director, a whole film crew in fact, going into the process of building that title. Illustrators, sound engineers, it is almost limitless.

And the other part that changes is the role of the reader; we are used to the reader as this passive vessel into whom the book's content is poured. But when you look at a title that includes interactivity, or even just collaborative annotation, the notes that I read, the highlights somebody else has left, are able to become part of the book's content. So, I think it's reasonable to think about readers as partners in the creation of the book and in some sense co-authors of that book or that reading experience.

CM: Interesting; so, within this context, how useful is the term ebook? Should we instead be talking about (digital) device-based reading, digital literature, new media literacies, or some thing else?

AS: It's still useful to talk about books as opposed to reading, because reading is going to fail to describe a lot of what might happen in an ebook. So, for example, if we were to talk about a traditional coffee table book that might be a collection of photography or a catalogue it's not really accurate to describe that as reading when you are flipping through photographs. When you are looking at an ebook that includes elements of film or image, photography, illustration, interaction, reading may only be a portion of what you are doing when you are using that title and it may be actually totally beside the point, you might have not any text within the title at all.

Arguably for that reason you might want to dispense with the label of book as well, but I think that book is still a useful term because

it helps us define expectations about what this experience is going to be. If you look at apps that are on the line between book and app, if they didn't come with the label "book" you wouldn't necessarily perceive them as a book: it is a collection of content, you may be navigating in a way that is totally non linear, but once you put the book label on it, certain expectations that we inherit from the codex.

That includes expectations about a book as something you are engaging with deeply, something that presents an idea or set of ideas, and something that, I would argue, has the potential to change the reader. Unlike a magazine or an app that presents content or headlines, when you open a book you have this sense that you are going to be having an experience that is coherent and that has the potential to leave you as a different person even if that just means a person with a different idea of the world, a different idea about a particular topic or a different set of knowledge.

CM: If we were to think in a longer time line, subjecting ebooks to the historical perspective of the codex or even movable type, what do you foresee in this digital transition, transformation, translation?

AS: I think a lot about video games. We are really on the early stages of recognizing video games as part of our cultural repertoire, we still think of them as gadgets or distractions. There a lot of folks out there making the argument that a video game is an important form of narrative, especially for younger people who spend more time with video games than any other media, and we are seeing examples of video games that really do tell a story, have a creative vision, and have challenging content.. If you think about ebooks as experiences that might converge with the way video games are experienced or the way some very interactive websites are experienced, we can anticipate a time when ebooks will become a part of our cultural repertoire, as one form of narrative that we may enjoy alongside film, gaming or traditional reading.

Right now the vast majority of ebook experiences are linear. Many people talk about the possibility for ebooks to become more like the "choose your own adventure" books that were popular for a while. That starts to bring us closer to video games: the idea that the reader would actually shape the experience of the narrative, the order in which the text is experienced or the order in which the content is navigated.



CM: Would you discuss some of the major affordances you see developing around ebooks?

AS: Ebooks open the door to engaging with so many forms of creativity and skill within the Emily Carr community, from illustration to film making, and from print design to interaction design. You might even get into thinking creatively about the ebook as an experience in a way that our performance art students and faculty will have very interesting ideas around.

Ebooks are amenable to all of those different forms of creativity because of the parameters of the devices themselves. With an Android tablet or iPad you can do anything you can do in a web browser, and actually more than that because they are gesture and touch-based. You can have simulated tactile experiences which engage us in a synesthetic way: you can have a title in which when somebody slams the door, your tablet physically vibrates. You can have a book where if you tip the tablet the text slides off the screen, because most of these tablets have an accelerometer.

The part that interests me the most is that you can have titles that are deeply social; we are now having an experience of the web through social media where interaction and conversation is an expected part of the web experience; that expectation is coming to the book. The idea of a book as a solitary engagement is really deeply embedded in our culture. Younger people who are growing up with this ubiquitous social layer in everything they do, because they are constantly facebooking and texting, are actually nostalgic or protective of that solitary quality of

“We are really opening up the possibility of what a book can be, and introducing all sorts of interactive elements, multimedia, and social elements that challenge our conventional notions of books.”

“Ebooks open the door to engaging with so many forms of creativity and skill within the Emily Carr community, from illustration to film making, and from print design to interaction design.”

reading, the idea that reading is immersive. For many titles that will continue to be the preferred way of engaging.

But for a lot of titles it is also going to be deeply enriching and exciting to see a book as a community, to have your reading experience enhanced by your simultaneous opinions or asynchronous comments of other people reading the same text. To see the pages that most people have commented on or that most people have read rising to the fore of your text because presumably they are the most important pieces of content. To share in real time, so that if you are reading a passage that you think is amazing, you can take that paragraph and you can tweet it right away, or you can facebook it, you can post it to your online community site, you can put it on to your blog.

Conventional reading has been increasingly sidelined because people are putting their attention into the forms of content that are socially enriched, or that they are able to integrate into their own narrative by pulling it on to their blog. The idea that those reading experiences can now become part of my social stream and my fellow readers can be part of my community, really speaks in a very exciting way to the social power of reading. How many of us have had these wonderful conversations with friends where they just read the book you just read, and you really connect around it. Now that experience is easier to find because you'll be able to see the people who are reading the same book as you and maybe even discuss it as you are reading it. Then you'll also be able to take that experience of reading directly into the social networks where you are all being engaged.

CM: Moving away from the technicalities and characteristics of ebooks, and thinking of them as a cultural artifact, why do we care about how we define them or about how they are received?

AS: Books are one of the central artifacts of our culture, and they are important both in terms of knowledge creation and learning. The book remains the core of our model of learning; now, that model is changing, but if you can find a student that hasn't had a book assigned throughout the course of their education I'd be very surprised.

Books are also really core to our notions of democracy. If you look at the history of the printed word and the rise of the printing press, they are very tightly intertwined. It was only with the advent of print and the ability to create books, and later periodicals, that you were able to create a sense of a common discourse: people reading, sharing and discussing the same set of ideas. When you start to chip away at the edges of what we understand that artifact to be you start challenging our notions of the role of the book as a core part of our democratic discourse. If people don't engage deeply with ideas the way that you would in a book, what will fuel our democratic conversations?

CM: You've participated in a number of projects through the "Art of the Ebook" program in the SIM Centre and you've worked with teams of designers and content providers. What would you identify as the major challenges of working with these teams?

AS: One of the challenges that we face at this moment is that we are all excited about the possibilities for transcending the traditional book but we are also really bounded in our imagination by that experience. If you look at what has been done by publishers versus what is being done by software developers, I would argue that the most exciting work in the ebook space is coming from people who do not have a background in publishing simply because they are less constrained in their imagination. One of the sponsors of our first big ebook project was BookRiff, which is a spin off of a very eminent Canadian publisher, Douglas & McIntyre, and I think it is telling that it is a spin off because you do need to create that space for an e-publishing project to be something of its own that isn't too tightly connected to the way that publishers traditionally work. In the case of BookRiff, they are creating the kind of the iTunes of books; instead of a book being something that a publisher defines and binds and hands to you, a book is something you essentially create or co-create by finding the content that is relevant and packaging it up and reading it as a single volume either online or in print.

CM: eBook or website? Where do we put content? Do we need ebooks?

AS: One the more interesting projects we had a chance to work on here is the *Learning, Freedom & the Web* that we developed for Mozilla. Mozilla is known very much as a web entity: they are the folks behind Firefox and their whole mission is to support an open web and to support the technologies, the processes, the people that make the web such an extraordinary and vibrant place. So it is very appropriate that when we looked to create an ebook for a title they had authored about the future of learning that we wanted to do that in a way that was as open as the web that Mozilla advocates for. We created the title in HTML5 because that is open standard, it has the ability to run not only on the iPad but the Android and just about any tablet, desktop or phone. The irony of that is that the experience of reading *Learning, Freedom & the Web* does feel quite book-like in the sense that there is a linear order, a table of contents sort of turned into a navigation bar, but you would ultimately recognize it as a book. At the same time, precisely because it was built in this open way, it works beautifully as a website. You can access this title on the web and you wouldn't necessarily feel that you were missing something by not reading it on a tablet.

That really points to the convergence of the web and the ebook, and both the limitations and the value of ebook as a label. Using the title of "book" you are framing the expectation for how people are going to interact with it, and encouraging them to dig deeper, to engage with the content. I hope the word ebook will persist, because I think it speaks to a really important need in our culture, which is for people to engage deeply with ideas.

At the end of the day it doesn't matter whether people are deeply engaging on a laptop screen or a tablet screen or a phone: if they are having that experience of diving into the text or into a collection of content, they are readers. They are experiencing a book.



DESIGNING THE VIGNELLIS: PROCESSES IN EBOOK PRODUCTION

/VIVIAN ZIEREIZEN & KENDRA STALDER

iPAD, APPLICATION
DIGITAL PUBLISHING, DIGITAL CULTURE
TECHNOLOGY, VIGNELLI

THIS PAPER FOCUSES ON THE PROCESS OF MAKING THE VIGNELLIS, a digital publication for the iPad and the technical challenges that came along with it. The end result was a functional ePublication that could be read on the iPad in iBooks. The publication explored the life and work of two famous designers, Lella and Massimo Vignelli of the Vignelli design firm. The goal of the project was to introduce us to a technology we had not yet learned much about and allowed us to gain some experience in sourcing material and gathering assets to make an entire publication from front to back.

It is very important for designers to realize the importance of the shift from print to digital and to accommodate this change as best as possible within their practice.

According to Ron Burnett, “there is no doubt that we have entered an unstable period of change as various traditional forms of media shift to accommodate the impact of the Internet and digital culture in general.” Since the introduction of tablets such as the iPad, there has been a shift in how users interact with content. Contemporaneously, the process of publishing material in the electronic realm has become increasingly easier.

The shift from print to digital has many benefits. Books, which previously took up physical space, can be stored in electronic form. By making print more of a valued commodity, designers can enhance the quality of books

that pass from the digital to the physical realm. There is no denying that there is something beautiful about print—the textures, the smell, the ability to say “this is mine.” The electronic book, on the other hand, is not finite; it is forever changeable and belongs to no one. It is not a physical object one can hold on to. This group project focusing on digital books was assigned to us in a third-year typography class instructed by Celeste Martin titled *Typographic Systems* at Emily Carr University of Art + Design in Vancouver, BC. The project involved sourcing content, both text and imagery, to create an EPUB-type ebook from scratch. Since we were given the option of selecting our own material, we chose three articles about designers Lella and Massimo Vignelli. While their names may not be familiar, their work on American Airlines and the United Colors of Benetton is instantly recognizable.



IMAGE 1 / The Final cover embodies the Vignelli's bold design style with colourful graphics and clean type.

The three articles and accompanying assets, taken from the *Design Observer* website, focus on the life and work of these two people, both as individuals and as a team. From start to finish, this project was a learning process; one of the main challenges was designing a piece about designers who themselves already have very strong opinions on what design should be. We wanted to make their visual voice apparent throughout the ebook despite the restrictions of the medium.

DEFINING THE PROBLEM /

Simplicity can be a beautiful thing; most times, less is more. An EPUB, however, demands simplicity. When our team first began designing the ebook, we were not clear on what we could and could not do. We quickly realized that in addition to being restricted to the 1024 x 768 pixel dimensions of the iPad screen, we were also limited by the margins of the “iBooks,” which did not leave us with a big workspace. The level of interactivity an EPUB offers the user is also considerably low, especially when compared to the digital magazines one can produce using *Adobe Publishing Suite*, both in the technical and aesthetic realm.

The EPUB files seemed to take on a mind of their own; once exported from *Adobe InDesign*, they often had myriad problems that had to be manually fixed in programs such as *Adobe Dreamweaver* or *Terminal*. The most important lesson that we learned from this experience was that there is no real value in memorizing any workflow. The technology is constantly changing and is being improved to the point where users have to do less and less.

Craig Mod, a designer and writer, points out in “Post-Artifact Books and Publishing,” that “the rules for iPad content are still ambiguous. None of us have had enough time with the device to confidently define them.” Being new to the technology, our group did not yet know what we could and could not do. We frequently turned to the internet for tips on how to fix certain issues; when one person did not have the solution, someone else did.

GETTING STARTED /

The first step in creating our publication involved sourcing the material and getting permission to use it. We contacted the *Design Observer*, and obtained written consent to use their articles for our specific purpose. Next, we were started creating a concept for our ebook.

“The electronic book, on the other hand, is not finite; it is forever changeable and belongs to no one.”



IMAGE 2 / Each article's opening page is assigned a different coloured circle which corresponded with the eBook cover.



Our research included looking at the body of work the Vignelli design firm has created. We considered some of their more influential work, such as the designs for the New York City subway systems, and some print designs they have produced over the years that prominently feature the colour red.

The NYC subway maps, especially the older ones, are quite beautiful and simple. The various colourful lines overlapping and spreading over an egg-white surface was a visual that particularly appealed to our team.

ITERATIONS /

Our final design is the product of various initial iterations that were simplified as the project neared its end. We had the text and imagery that we needed from the *Design Observer*, but we had nothing that tied the everything together with one cohesive visual language. Our solution was to create a cover and openings for each section that included vector images inspired by Vignelli's subway map.

Cover Iterations

The cover went through a process of simplification throughout the project. (IMAGE 1) We started by featuring a portrait of the Vignellis together, and while it was a beautiful image, it did not suit the publication. We next appropriated the cover of the NYC subway maps (seen here: <http://www.flickr.com/photos/dsostatic/3947688462/in/photostream>). We started with an overabundance of dots and simplified the design as we worked toward the final version. The cover we ultimately chose was the one with colourful dots on a light coloured background, as it most embodied what we think of as Vignelli's bold design style.

Section Iterations

The openings for each article also underwent changes throughout the process. Our first iteration was heavily inspired by the colourful

“Simplicity can be a beautiful thing; most times, less is more. An EPUB, however, demands simplicity.”

lines that are present in the NYC subway map (seen here: <http://www.vignelli.com/recent2.html>). We started by including the title and author of the article as part of the image, but this soon proved to be problematic as the text could not be linked to from the contents page without using a cheat. The text also detracted from the beauty and simplicity of the colourful lines and weighed the image down with its bold black presence, so we removed the typographical element. We then noted that the article openings did not connect well with the simplicity of the cover. We liked the simplicity of the cover, and wanted to carry that over into this element of the publication. As such, we decided to match the illustrations at the beginning of each article to the cover by assigning a different coloured circle to each article. (IMAGE 2)

WHAT THE FONT? /

When reading a book on iBooks, there is a short list of predefined fonts the user can choose from, such as Georgia, Baskerville and Verdana. They work, but using presets would not add any sense of originality to the publication. As such, we decided to choose our own fonts.

Massimo Vignelli is renowned for being very particular when it comes to typefaces. In one interview about the proliferation of fonts, he had this to say about how many good typefaces exist: “there’s no more than a dozen, actually

I don’t use more than three or four in my life.” With this in mind, we chose two fonts he uses often: Helvetica and Bodoni. We soon realized that this was a poor choice; as anyone can unzip an EPUB file, only freeware fonts can be included. Additionally, high contrast fonts like Bodoni do not read as well on screen as in print.

As an alternative to our initial choices, we decided on two open-source fonts from Google Webfonts. We wanted to keep a degree of similarity to Helvetica and Bodoni, so we chose a sans-serif typeface named Questrial for the titles and headers and a serif typeface named Sorts Mill Goudy for the body text. To further establish a connection to Massimo Vignelli’s design, we used two of his favourite colours: red and black. Red was used for all the titles and headers, while black was used for the body copy.

FINDINGS /

Working on a piece that was about such influential designers was a challenge as we had to make sure to stay true to their voice, while maintaining our own. We also had to work as a team and play off each others’ strengths to achieve the final product. Mod states, “Of the books we do print — the books we make — they **need rigor**. They need to be books where the object is embraced as a canvas by designer, publisher and writer. This is the only way these books as physical objects will carry any meaning moving forward” (emphasis in original). The same might be said for ebooks.

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STEREOSCOPIC

3D



GLEN LOWRY / CHANGING VIEWS ON RESEARCH:
A DIALOGUE WITH MARIA LANTIN
PAIGE LOUIE / ILLUMINATING VANCOUVER'S NEON

Erich Stüssi models 3D vision outside of Emily Carr University of Art + Design

INTRODUCTION / STEREOSCOPIC 3D CENTRE

IN SEPTEMBER 2009, *Kerner Optical* approached us with the idea of forming a Stereoscopic 3D Centre at Emily Carr. We took up the challenge, and by November 2009, during the *Interactive Futures* conference (on the theme of Stereo) at Emily Carr, we were ready to announce the initiative. Preliminary funding came from *Western Economic Diversification* in February 2010, and by May we officially launched the Centre.

The S3D Centre allows us to bring together people and resources, and to increase the level of exploration and production of stereoscopic images, videos, interactive work, and hybrid forms. We are now able to support a full S3D pipeline, from pre-production, to capture, edit, and display. Members of the S3D Centre team possess a complimentary set of skills that include stereoscopic photography, filmmaking, editing, animation, stop-motion, time-lapse, interactivity, and rigging. Given the technical complexities of the medium, it is essential that all practitioners and researchers involved in the production of S3D develop an understanding of the theory and practice of stereoscopic image-making. The activities of the Centre aim to bring together industry professionals, students, artists, and independent filmmakers to promote the art and practice of S3D. We want to support those who, through their practice, are generating a new cinematic language for S3D. Our objective is to give British Columbia's screen-based professionals the training needed to build the province's competitive advantage, and to ensure that creators use the third dimension to produce new ways of telling narrative and non-narrative stories.

We have started a series of meetups and master classes that feature well-known experienced practitioners in the field of stereoscopic 3D. The meetups serve as free informal gathering of the S3D community and have helped

to strengthen connections between artists, students, academics, industry representatives and professionals. The master classes are more in-depth explorations of topics of interest to the community. Guest speakers and lecturers at the Centre have included Ian Herring of Parralax Productions, Dylan Reade of IMAX, and Marty Banks of the Visual Space Perception Lab at UC Berkeley.

OUR SPONSORS /

From its inception, the Emily Carr S3D Centre has benefited from the support of many organizations and funding bodies, including Western Economic Diversification (WED), Natural Sciences and Engineering Research Council (NSERC), the Graphics, Animation and New Media Network Centre of Excellence (GRAND NCE), and the NRC Industrial Research Assistance Program (IRAP). This support has enabled us to quickly build an applied research portfolio and liaise with local industry to align our objectives with their needs.

OUR PRIORITIES /

Our mission is to advance the art of stereoscopic 3D through research, education and training. In addition to workshops and training events, we offer courses through Emily Carr's Continuing Studies Program, and are integrating S3D into the regular undergraduate curriculum.

/ MARIA LANTIN



CHANGING VIEWS ON RESEARCH: A DIALOGUE WITH MARIA LANTIN / GLEN LOWRY

“It was a very conscious decision for me to merge into the art world...The innovation with digital media was happening with artists.”

Recently, I had the privilege of sitting down to video tape a conversation with Maria Lantin, the director of Emily Carr’s ground-breaking Intersections Digital Studio (IDS) and new Stereoscopic 3D (S3D) Centre of Excellence. Lantin’s particularly blend of energy and enthusiasm for contemporary art practice and background in Computer Science allowed her to speak eloquently to emergent areas of cross-disciplinary practice between creative practitioners (artists, designers, media makers) and more conventional academics. Taking her PhD in Computer Science into new areas of creative practice research, Lantin has built a strong reputation for working with artists to develop and code visual projects.

Something of a refugee from the more obvious climes of the Computer Science Department, Lantin has worked inside the university and out.

Before coming to Emily Carr to start up IDS, Lantin led the Visualization Lab within the Advanced Research Technology (ART) Labs at the Banff Centre, and she has an impressive knowledge of the interactive new media. Consequently, Lantin is well aware of the unique challenges involved in reformulating her work in relation to practices and processes creative inquiry. It is clear that she is excited about her work at Emily Carr and the potential to transform the “art school” context into a new space of creative and critical inquiry.

“The opportunity to go into an art school was an opportunity for me to define for myself what it means to be a researcher.”

For Lantin, the Emily Carr art and design research context is a space of possibility. Deciding what and how to publish in this new research environment, thinking about how “to integrate the practice and the research,” as Lantin suggests, is vital to understanding of the transformation of twenty-first century universities. The contributions of artists and designers have the potential to positively affect broader thinking about research methodologies and new modes of knowledge production and knowledge mobilization.

Recognizing that the question of “art and design research” asserts an unstable monad that points to a disparate cluster of practices and contexts; it is, nevertheless, a key point of entry into the transformation of academic practices across disciplines and institutions. Trans-disciplinary collaborations among artists, designers and other academics, such as those staged with IDS and S3D, reshape knowledge production (and consumption) in this age of digital media, or what Communication theorist Henry Jenkins calls an age of “media convergence.” As Lantin’s work demonstrates, creative practice research is vital to ongoing discussions that are reformulating connections throughout the university, not only within Arts, Humanities and Social Sciences, but also across the fields of Science and Applied Sciences.

In our conversation, Lantin and I touched on the opportunities and expectations one faces working with artists. Careful to avoid the pitfalls of an art/scholarship binary, Lantin reflected on her Computer Science training and the larger institutional context within which she sees this

work at Emily Carr. On one side of the spectrum, Lantin discussed instances when she is called on to provide her highly specialized skills and knowledge to help the artists or team of artists realize their creative vision—computer coder as hired gun. On the other end of the spectrum, she mentioned the work she is doing with Lela Sujir, Concordia Professor and video artist, with whom Lantin has developed a more fluid or dialogic form of collaboration in which the two work together to articulate and realize a shared creative vision. In discussing these different approaches and possibilities, Lantin is clear that both are crucial and suggest a wider conception of cross-disciplinary collaboration and to her ongoing growth as a researcher.

“You are not in a discipline; you are disciplined.”

At the heart of our conversation is the question of changing academic practice, both from within the Art and Design university and across the larger inter-institutional contexts our academic training allows or expects us to traverse. While interdisciplinarity—likewise trans or cross disciplinarity—is seen a key element of contemporary academic development and has been an administrative buzz word for many years, the practice tends to be misunderstood or, worse, oversimplified. There are many reasons for this, but two key aspects of the problem can be linked to the public nature of creative enterprises—the fact that artists and designers work very much in the world. Notwithstanding the rarified nature of the art gallery system or exclusive nature of significant areas of design, artists and designers are used to articulating their goals and intentions for nonacademic end users, often lay people. That is in contrast to other specialized scholars whose primary audience is their peers or at least other specialists in a given field, specialists who will be conversant with the terms and stakes of a shared discourse.

Another key issue or related difference has to do with time it takes to develop and disseminate art and design work relative to conventional scholarship. Lantin and I discussed research methods, critical precision, and the importance of disciplinary training as a means of engaging “in-depth curiosity.” We discussed a recent debate among members of the Modern Language Association (MLA), an international organization that represents scholars from across the Arts and Humanities, around long

dissertation completion times and the fact that many of the current crop of PhDs were working or expecting to work in outmoded forms of print culture. It was pointed out that many had entered the field before the advent of social media. It seems that artists and designers might have significant methods they can share here. The need to broach difficult ideas and subject matter and to present their research to diverse audiences or stakeholders drives creative practice and as such, has allowed professional artists and designer to develop vital skills and approaches that they might share with other academics. All too often however the focus of disciplinary inquiry and training makes this cross-fertilization difficult, and as Lantin suggests, Computer Scientists do not necessarily recognize the contribution of artists.

“There’s a lot of joy in making something happen for someone else. An idea that had been brewing in an artist mind could be realized by the skills that I have.”

Challenging the desire to speed up the research process and the push to bring ideas to light quicker—in the blink of a tweet—Lantin mused on the importance of slowing down, of carefully crafting thoughts and articulation and situating them within the broader field. With the realm of visualization and computer driven media innovations that are integral to Lantin’s multifaceted practice, the attention to scholarship and to time-tested scholarly processes provide an important counter point to the rush to public that is underwriting academic endeavour across the disciplines. While it might be useful for Humanists to speed things up and to engage in a more open, less obfuscating process of publication, this need not necessarily be the case for areas of study that have developed their research agendas in the midst of rapid technological change—data visualization and new media, being obvious examples.

The careful, critical approach Lantin brings to her collaborations underwrites the powerful potential of Emily Carr’s new research agenda and the influence of IDS and S3D. Her commitment to working among artists to hone her own visual methods, while remaining conversant with the training, interests and expectation of computer scientists, is a testament to the transformation of 21st century universities and the influence of hybrid researchers.

“For Lantin, the Emily Carr art and design research context is a space of possibility.”

ILLUMINATING VANCOUVER'S NEON / PAIGE LOUIE

COMMUNICATION DESIGN
INTERACTION DESIGN
MOBILE APPLICATION
AUGMENTED REALITY

THIS PAPER INVESTIGATES THE DEFINITION OF DESIGN *and the topic of the design process in relation to a Museum of Vancouver (MOV) exhibition: The Visible City: Illuminating Vancouver's Neon.* With the growing popularity of design in North American culture, there is an increasing desire to classify and categorize what constitutes design and its impact on everyday life. But is there really a need to separate design from any other field of study? To be a designer, there is a need not only to have knowledge of your subject, but also to have understanding of culture, technology and people. When designers do not understand the world around them, their designs cannot be successful. Through an exploration of the design process that emerged in conjunction with the MOV exhibition, this paper describes my outlook on what design currently is and how I see it maturing and adapting in the future.

INTRODUCTION /

The Museum of Vancouver (MOV) was founded in 1894 by the Art, Historical and Scientific Association. This museum has had many changes of address over the years, but it has maintained its purpose: to engage their audience in Vancouver's wealth of culture and history. The MOV is currently located in close proximity to the downtown core. According to its directors, the MOV is working to create a more relatable and dynamic museum. Their goal is to draw in a more diverse audience to share in the rich history of Vancouver. In September 2011, representatives from the MOV approached Emily Carr third-year Communication Design students to collaborate on the interactive portion of an upcoming exhibition. This exhibition, *The Visible City: Illuminating Vancouver's Neon* showcases over fifty of Vancouver's heritage neon signs. Only fifty years ago, Vancouver was a riot of colour that exploded along the downtown streets by way of the largest displays of neon in the world. Vancouver was known nationally as a city of neon. Today, these loud, bright and bold fixtures have all but disappeared from the

city's landscape and the public's memories. As Vancouver's downtown core undergoes rapid transformation, the MOV strives to bring back the inviting atmosphere of the city's heyday by way of exploring the narratives behind Vancouver's neon heritage. Although these signs will never again occupy the bustling streets of downtown, this exhibition's goal is to re-illuminate these neon signs in the minds of the public. Doing so re-constructs a collective memory of the history and heritage of the city of Vancouver. Along with a physical showcase of the neon signs, their exhibit includes an interactive, virtual exhibit online. The design team for this project was comprised of myself, Ease Poon, Alejandra Rivera, and Dafne Sagastume. We began by brainstorming on the general topic of neon signs, which led us to create a collaborative mind map. Elzbieta Kazmierczak suggests that creating mind maps is an effective way of clarifying the "mental diagrams of our conceptualizations about objects and events." Throughout our time working as a team, we grew to value the individual ways each team member approached a design problem.



IMAGE 1 / Final iPhone Application. Inspiration for the final design came from images and illustrations from 60's.

DESIGN BRIEF /

The goal for this project was to create an interactive application for smartphones that ties the narrative behind a single neon sign to a larger narrative about the history of Vancouver. Each team of students was asked to explore a specific sign in a particular location in the city. Taking a multi-sense approach, we were to place a particular emphasis on the holistic examination of the social, political and economic impacts of each particular sign on the city and its residents. We were also asked to include the use of an auditory component and Augmented Reality (AR) within the application. We were shown an example of AR made for the Museum of London. This application allowed smartphone users to use their Global Positioning System to find the location of an environment pictured in an artwork that was currently on exhibit. Once at the site of the artwork, museum-goers could use the application in conjunction with their phone's camera to see the exhibited artwork on top of the live view of their current location. Our target audience was any person using a smartphone. The neon sign assigned to my group was the Helen's Children Wear sign. This sign is located on the border of Vancouver and North Burnaby in an area called the Heights. Helen's sign was bought by the city of Burnaby in 2009 and was changed to read "Heights" instead of "Helen's." (IMAGE 3) The Heights sign, also known as the swinging girl, is the only kinetic neon sign left in Vancouver.

RESEARCH AND METHODOLOGY /

Given that we had only four weeks to complete this project, we were quite limited with the amount of research we could do. Luckily, University of British Columbia (UBC) students who had already worked in collaboration with the MOV on this interactive exhibition shared their research and findings with us. The MOV also gave us access to their newspaper archives from which we explored and developed an understanding of the opinions on neon signage during Vancouver's most prosperous era. While there was a substantial amount of information gathered by the UBC students, this data lacked insight into the character of the Heights community. As such, as a group we toured the neighbourhood and talked with the local business owners and residents. Many businesses in the area are owned by second or third-generation merchants. Overall, we found the community to be a tight-knit group of individuals from varying walks of life. Through our observations of the Heights, we clearly saw a close bond between the merchants and the community at large. After coming to an understanding of the Heights community, we moved on to the story behind the unique kinetic sign. The store, Helen's Children Wear, opened in 1948; it closed in 2007 because the owner, Helen Arnold, felt that running a store at the age of 87 was too much for her. After she sold her store, the City of Burnaby bought the sign and changed it to read "Heights" instead of "Helen's." The sign currently stands in its original location, having gained heritage status in 2010.

“A single story can be interpreted differently every time it is told, depending on the narrator and the audience.”

“... design must be seen as a cultural forming and shaping process because design is much more than creating a simple product.”

DEVELOPMENT /

After familiarizing ourselves with the story behind Helen's sign and the rich history of the community surrounding this heritage landmark, we knew that emphasizing this community history was going to be our design's core. As Jodi Forlizzi and Cherie Lebbon affirm, “at the heart of design is the goal of communication, and installing a belief in the audience about the past, present or future.” As Forlizzi and Lebbon recommend, we also strived to create empathy with our target audience. Since our goal was to mitigate the absence of visual and cultural knowledge of neon signs, we decided to find a way to use our designs to form and shape a new neon culture. To paraphrase M.P. Ranjan in his work *Hand-Head-Heart: Ethics in Design*, design must be seen as a cultural forming and shaping process because design is much more than creating a simple product. To frame our core narrative of the Helen's/Heights sign, we created a shell

that would hypothetically house all of the unique narratives of the neon signs. (IMAGE 2) We wanted the front page to be unbiased towards any particular neon sign; the design, therefore, had to generally represent the time period of the 1950s and 1960s. Through many sketch iterations, we struck an idea we all agreed upon. Each square shows a different neon sign in black and white, creating a neutral background while showcasing the variety of the signage. For the final design, we chose five bold colours to illustrate the vitality and playfulness of neon. The second component of our project consisted of the narratives of the neon sign and the Heights community. Because the sign was created in the 1960s, we drew our graphic inspiration from images and illustrations from that era. For the final design, we chose to keep the interface mostly graphic orientated so as to avoid cluttering up the small space of a phone screen. This part of



IMAGE 2 / A shell application (first two from left) houses all of Vancouver's neon signs and acts as a portal to applications developed specifically for each sign, such as the Heights (right).

the mobile application also contained the AR capability. From our research on effective AR applications, we came to the conclusion that simple graphics and well-planned activities were the most engaging. As such, the AR within our application only does two things. Firstly, when the user is in AR mode and points their phone's camera at the Heights sign, it will display the original Helen's sign, whether it is day or night. Secondly, when one is in the Heights area with the AR mode activated, text bubbles will appear on top of the shops. When the user clicks on a text bubble, a short sound clip of a Heights citizen interview will play.

FINDINGS /

This project has given me a better understanding of the importance of meaning when creating a design. A single story can be interpreted differently every time it is told, depending on the narrator and the audience. After doing our research and interacting with the community surrounding the Heights sign, I can fully appreciate Julka Almquist's and Juila Lupton's contention that "while use is most frequently the manifest function of an artifact, meaning can also fill this role." The sole function of this swinging neon girl is to be the symbol of an affable and caring community. A particular strength of our group's proposal was including a macro consideration of the entire mobile application exhibition as well as the micro consideration of our assigned neon sign. Because we included the platform of the main application, containing links to the individual signs and their histories, an individual using our mobile application for the first time would be able to understand the context of the interactive exhibition. Furthermore, for the narrative of the Heights sign, we closely considered the ease of transition between the individual story told about the sign and the collective narrative told by the citizens of the Heights. The two parts of our application, which are entirely distinct in their appearance, share an intuitive and consistent user interface.

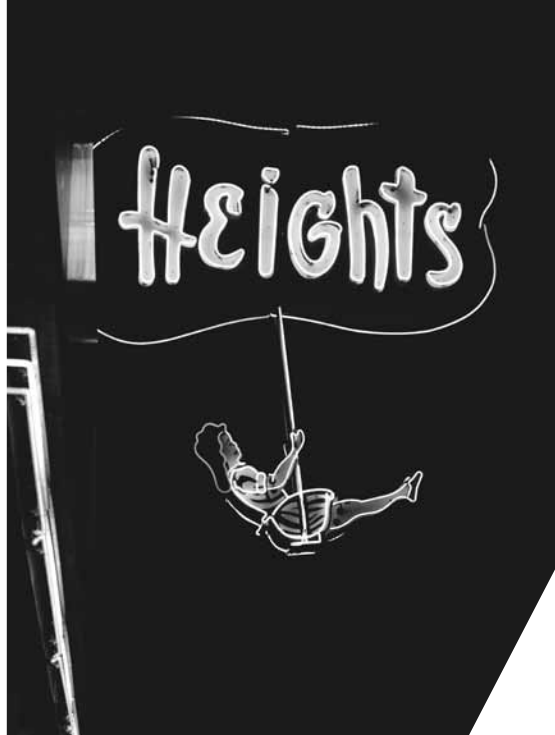


IMAGE 3 / The Heights sign at the original location on the boarder of Vancouver and Burnaby. It is the only kinetic sign left in Vancouver

CONCLUSION /

This project showed me my limitations as a designer and also the effectiveness of a well-organized and diverse design team. As Robert Harland states in his article "The Dimensions of Graphic Design and Its Spheres of Influence," "design is a portmanteau term: it covers a number of interlaced activities that do not fall into distinct categories." In the future, I will strive to extend my knowledge on any and all activities relating to design. I was fortunate enough to have group members with varying skill sets and I feel we all learned and grew stronger as designers during our time collaborating. We worked very hard on creating a visual language that was easily accessible to our audience. I believe that our project's focus was on the right scale to engage our target audience. Additionally, its visual language can become the starting point for conversation and new ideas, a concept recommended by Ann Thorpe. This project also helped cement for me the importance of looking back at the past to understand and design for the present and future. As Harland asserts, "mapping the future of the profession will be difficult without looking back at our history to get a better idea of where we are going." Designers have been generally thought of as producers of pleasing appearances. Kazmierczak, however, suggests that a designer really "create[s] relationships among singular symbols." These relationships are the means we use to communicate data. This concept is what I believe to be the heart of any design.

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View of the North Shore Mountains taken from the Vancouver Convention Centre

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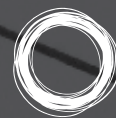
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*Nathalie Lavoie | MAA Candidate
"An Attempt to Measure Duration with Water"*

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Projects are situated in three studios: Social + Interactive Media Centre; Stereoscopic 3D Centre; and the Health Design Lab.

Research faculty and students work in collaboration with partners on projects that:

- require creativity and design
- have practical outcomes
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Social + Interactive Media Centre

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