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Developing design education and knowledge for heritage

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Introduction

For a while now I have worked on ways to bring activities with the museum and with heritage institutions into the design research curriculum at my institution.

Underpinning my desire to do so is the belief that working directly with heritage artifacts can provide artists and designers with a unique educational experience. Aside from giving them access to the institution itself, developing digital new media projects with (galleries, libraries, archives and museums) GLAM institutions affords an opportunity to critically engage with and learn about the domain knowledge in which a project is situated, such as for example anthropology, biology, history, or naval architecture, not just by reading but also, by doing.

The projects showcased in this essay include Havis Amanda, an interactive installation created for a major exhibition held by the Helsinki City Art Museum throughout the summer of 2008 and in the Oral History of Finnish Designers, a pilot project produced for the Design Museum Helsinki during 2012. The work described in the projects took place in the context of the Media Design Research seminar at Media Lab Helsinki. Among the main objectives of the seminar are to impart knowledge about how artifacts of material as well as intangible culture acquire meaning in use. The ultimate objective of the seminar is to make designers aware of the kind of understanding needed to create artifacts to support human social activities.

Research and design

What is research for design is a topic of continuing debate among designers and design scholars. Already in 1972 John Chris Jones argued for a paradigm of designers as self-organizing systems that simultaneously search for suitable designs as well as control and evaluate the patterns of the search. According to Jones this paradigm is viable *if* it is possible to produce an accurate model that includes 1) a high-level, strategic, plan and 2) descriptions of the context in which the designed artifact(s) will be deployed. Presumably the objective of research for design here would relate to being able to supply precise information regarding the state and use of artifacts created for a particular context of use (55). Later on Klaus Krippendorff noted an incompatibility between scientific research rooted in past observations and predictions and re-search in design that is intent with effecting changes in the world “in ways not predictable from natural laws” (29). From this perspective, he has proposed that designer’s ideas need to be “narrated, visualized, communicated and eventually acted upon by those who can bring the intended artifact into being” (30). More recently, Fallman has suggested that design research includes aspects of a grounded (reality-based) practice in which a research question guides the design

processes through an explorative space of possibilities. Additionally, elements of design studies and theory need to be brought into this space intentionally, with the goal "to build an intellectual tradition and to contribute to an accumulated body of knowledge" about the field (8-9).

From the perspective of the work reported in this essay in which the collaboration with heritage institutions has been used as part of the education and research curriculum in design, the issue of creating a common discourse that participants share throughout the project has been of prime importance. This is one of the reasons why, while engaged in the project, students are encouraged to reflect critically on the distinctions between their practice and that one of his or her colleagues in other fields. For example, a designer might be knowledgeable about topics such as history and archeology. Nevertheless, unless the work to be done originates from a design-oriented perspective, the center of focus for the designer will not include examining the historical sources and developing theories about them, but rather, finding ways in which to better *communicate* the hypotheses and observations built by her peers. Thus, it behooves the designer working in collaborative projects such as these to negotiate his or her involvement and role from the start. What knowledge does each of the participants bring to the project? How will this knowledge contribute to the final results expected from the project?

From this perspective, the course employs a definition of research in design as the use of analytical tools to assist in the development and implementation of artifacts following a human-oriented design perspective. Artifact itself is a term used to designate items (material as well as immaterial) that are the result of an artificial intervention. Human-made artifacts can be described through their properties using language. According to Krippendorff language is also the foundation that allows us to not only build narratives and complex visualizations but also create new artifacts. This is the case even in our contemporary world of digital infrastructures.

Education in design and research through heritage

In the Media Lab Helsinki, the research in design for Master of Arts students have been taught using a seminar style course (Media Design Research) that runs for two semesters, beginning with the autumn semester during which students are introduced to theoretical discourses and methods of design research followed by a practice-oriented spring semester during the students work on the implementation of a project with a client. In recent years, the students have for example, produced new concept work for large enterprises such as the national broadcasting company YLE and worked with local entrepreneur firms, such as Oppi.fi, a firm developing new software tools to enable citizens to create and contextualize their life stories within historical timelines.

A thread that has ran through in the seminar and other courses taught by the author of the essay has been the use of cultural heritage as a teaching resource that enables students to actively learn about design research methodology, as well as culture and history by doing. In the course, the students are placed in situations where they learn about material and intangible culture and heritage and how these contribute to the quality of our everyday lives and environments by working in design projects

carried on with GLAM institutions. The aim has been to acquire practical experience of working in a real life situation with review cycles and deadlines and also, to develop an analytical capacity to read and interpret cultural contexts and so-called situations of use.



Figure 1: Image of the interactive installation of the Finnish Pavilion at the 1900 World Fair in Paris. For more information about the project see: <http://paviljonki.mlog.taik.fi>

Among significant media art works that have been created using this methodology are the interactive virtual reality installation about the Finnish Pavilion at the 1900 World Fair in Paris and the Re-discovering Vrouw Maria. In the case of the first work in addition to developing their skills about 3D modeling and animation, the students had the opportunity to learn about the birth of the Finnish nation as well as about the origins and history of Finnish design. The Vrouw Maria project involved collaborating with archeologists, art historians, biologists and sound engineers, among others.

Human-centered design methods

In addition to the work with heritage, the students learn to use some of the tools and methods of human-centered design such as scenario-based design and ethnography as well as instruments from other disciplines, such as the artifact analysis method. Developed initially by Dr. Susan Pearce, the artifact analysis method is used in archeology and museum studies but has been adapted by Dr. Lily Díaz for use in design research.

The designer might be given or asked to select an object and to research the provenance of the artifact. The objective is to create a clear description of the tangible as well as the intangible characteristics (or attributes) of the item such as for example: the material(s) that is made of, size, the parts and manner in which they are organized; the origins and historical context. After this thorough description is

assembled following more or less a traditional humanistic approach that considers the context of the item from the past to the present, the student is then asked to adopt a design approach and consider the affordances and constraints of the item (Norman).

Affordance is the term initially used by psychologist J.J. Gibson to describe perceived characteristics in the environment with its the ecologies of artifacts, that enable (or even promote) human action. Constraints on the other hand are thought of as inhibitors. Are the affordances and constraints contingent on the situation of use? Do they tell us something about the environment for which the artifact was created? Do they inform our understanding of the structure of the artifact? Is it an enabling artifact? These are some of the questions that the students are asked to ponder about.

In the second part of the exercise, students are asked to consider whether they can imagine a similar digital artifact. How would the digital version be similar to its material or analogue counter part? How would it differ? By injecting the future-oriented epistemic vision characteristic of design, the new variant of the method seeks to go beyond the study of artifacts as something that is solely focused on history. At the same time, the objective is to make the process of designing of new artifacts as something that is firmly focused on the cultural and historical context.

The methods learned through participation in the course are employed within a problem-based framework built around the objectives of a given project. Learning to survey and visualize each situation (or context) of use through the combined use of pragmatic knowledge and analytical methods has been a general goal of the work. In the Havis Amanda project for example, there was a need for all the students to acquire knowledge not only about the origins of a relatively new tradition but also to understand the role of public art monuments. This required that some of the students carry on archival research and communicate their findings to the group so that it could then be incorporated in the final work.

With the objective of making each of the unit as balanced and self-sufficient as possible, participants are organized into teams according to their skills and interests. In each of the teams there is at least one person willing and able to assume the following roles: Management and production scheduling; software design and technical implementation; conceptual thinking and visualization; editorial and communications. In the Oral History project it was also important to organize the student groups so that each team would have at least one Finnish-speaking student able to guide our Erasmus exchange students through the cultural and linguistic intricacies.

Case example one: *Havis Amanda, Mon Amour*

To celebrate the 100th year anniversary of Havis Amanda, one of the most beloved public monuments in Helsinki, during the spring and summer of 2008 the Helsinki City Art Museum produced the exhibition *Havis Amanda, Mon Amour*. In general the exhibition covered the history of the statue and its maker, Ville Wahlgren. It also focused on the impact this work has had on the citizens of Helsinki during the 20th

century and beyond. As a part of the exhibition, the curators asked the Media Lab MA students at the University of Art and Design Helsinki whether they would be interested in creating a movie for the exhibition. After examining the materials and deliberating about the situation, the course participants (including the professor) decided to propose to the museum that instead they should design and implement an interactive artwork about the monument and the carnival celebrations built around it. The museum personnel were enthusiastic about this proposal.

During the concept phase, the students came up with many varied scenarios from which one idea was chosen for further development. This idea was to study the phenomena of "crowning" the statue and to transfer the ritual to a virtual setting. Every year during May Day, also known in Finland as *Vappu*, the students from one of the universities in Helsinki crown the statue with a student cap to celebrate the end of a study year. This event has grown from a 1920's student prank into a big celebration witnessed by thousands of people gathered around the statue. Regardless of the intended inclusive nature of this event, only one person can place the hat on the statue. This artwork intended to extend this ritual to anyone interested in experiencing this part of the student celebration during the exhibition.

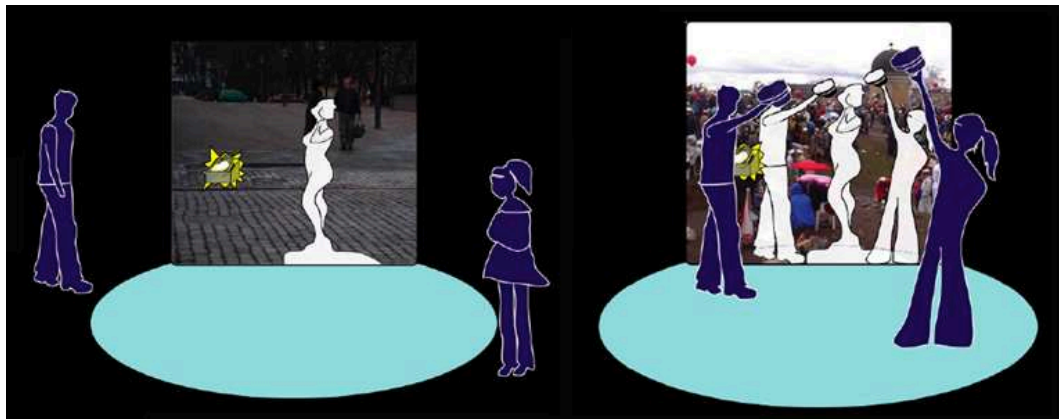


Figure 2: Highlights from the concept developed for the Havis Amanda, Mon Amour exhibition by the students in the Media Design Research seminar during the year 2007-2008. The students who created the installation were: Aleksii Hyvönen, Anna Keune, Suvi Kitunen, Sonja Krogius, Juha Kronqvist, Mikko Pykäri, Abhigyan Singh and Kristine Visanen.

In the final concept that was developed, museum visitors watch and interact with a video about *Vappu* that is triggered by their actions by means of a tangible interface. The video itself was created from archival footage obtained, with permission, from the Finnish Film Archives. This aspect of the project gave the participants involved an opportunity to learn about the idiosyncrasies and processes involved in conducting research in a film archive.

The focus of the interaction in the final installation was on the crowning and Carnival aspect of *Vappu*. The tangible interface was driven through the use of a cardboard representation of the university student cap (*ylioppilaslakki*). As is shown in Figure 2, the young designers created it as a special card with fiduciary markers. This was produced by the Museum, in the form of a postcard, and in addition to serving as a prop for interaction with the installation, was given for distribution as a souvenir of the exhibition.



Figure 3: A visitor to the 2008 summer exhibition of Havis Amanda, *Mon Amour* "crowns the statue". The gesture was realized virtually in the interactive installation. Photograph by Lily Díaz, 2008

Throughout the project the course participants worked with the professor (Lily Díaz) in the research and concept development aspects. While the producer for the department worked with the students and the museum in coordinating the production, a doctoral candidate from the Media Lab Helsinki taught the participants elements of interaction and user interface design.

Unlike in other projects, no systematic user studies were carried out to gauge the audience's response in the exhibition floor. Nevertheless, the students kept alert about the comings and goings of the exhibition, in order to make sure that everything was working properly. The professor visited the exhibition several times during this period of time. The comments from the museum officials regarding the audience's reception of the work were always positive. At the conclusion of the exhibition, all the course participants received a certificate from the Museum's director.

Case two: Oral history of Finnish designers project

During the autumn of 2011, and based on the positive experiences with previous projects, the Design Museum Helsinki contacted the Media Lab to discuss an ambitious proposal. The work included the possibility of using the Media Design Research seminar course as a platform from which to develop a project to interview and document the lives of famous Finnish designers. As the curator from the museum explained, though the institution has printed archival documentation of many of the designers in their collections, they felt that the context or documentation of their everyday life and practices and experiences was lacking. Simply put, the new digital media, offered unprecedented possibilities to capture this information and develop an audio-visual archive that would support the works in the collection and be used in their exhibitions.

After some discussion with the museum personnel, a memorandum of understanding that outlined the basis for the collaboration in terms of objectives and deliverable media artifacts was drafted and signed. In the agreement, it was stipulated that the museum would provide the seminar participants with knowledge about design history. This would be done through lectures and meetings with the course participants and teachers as well as through access to a sample of famous Finnish designers represented in the Museum's collection, and chosen by the museum. In addition to providing access to the artifacts and the archival documentation, the curators made the arrangements so that the young scholars would be able to interview the designers. The Museum also agreed to pay the participants a modest stipend for their work.

Participants in the course agreed to also "develop innovative media concepts to support new modes of interaction in the museum" as well as give the institution the media data objects – the video and audio files as well as the transcriptions – created through the interviews done in the project. It was agreed that the intellectual property rights for the interviews would remain open but that the students would keep the copyrights to their media concepts, if they so desired.

Design research and media concept development

The project began with a presentation by the museum's director followed by a brief lecture by a museum curator who introduced to the students a sample of possible designers gathered for the project. After these initial sessions, the students were asked to organize themselves into groups and make separate appointments with the curator to discuss their orientations. The result of this process yielded four groups with four students each. Based on the discussions with the curators and on their own interests, each group selected a designer to work with. The four designers that the students worked with were: Björn Weckström, Olavi Lindén, Ben af Schultén and Jorma Vennola. As part of the goals, each student group realized an interview as well as design a concept proposal for how the work of each designer could be displayed in the museum in an interactive and accessible manner, using digital media technology.

As part of their work for the course, the students carried out fieldwork observations of the museum itself, the space, the collections, and the current exhibitions. With the assistance of the museum curator, they also studied the designer's items in the collection as well as other archival available materials. Concurrent with this work, the principles of scenario-based design and ethno-methodology were presented in the seminar. Scenario-based design is a creative design research instrument that makes use of narrative and storytelling in order to *envision the usage situation in many different ways, from multiple perspectives*, and considering many purposes. It has also been suggested that the use of scenarios in the design research process often results in a broadened understanding of the problem domain that includes many potential solutions (Feste).

In general, designers create something because they have received a commission and are going to fulfill the expectations, or because it is part of the work to be done in an enterprise, or maybe even because they desire to contribute to the solutions to

current social problems. In this manner design is not only prescriptive but also concerned with the future (Lawson 169). As part of this future-oriented epistemology, scenario design narratives are important when there is a need to interact intimately with the concrete elements of situations that does not yet exist (Carroll). By concretely embodying the design (through the use of visual and textual devices) the method also exposes the design process to dialogue, thus supporting a critical design practice.

The course participants used this technique to create scenarios of their initial concept designs that they presented to the museum director and curator. In this manner they received feedback to their concepts, from the client, their peers, as well as from the professor early in the process. This work also helped to prepare them for the project's next stage. This stage involved carrying on fieldwork on the premises of the museum in order to try to better understand the institution and its objectives, how it seeks to service its audience and whether the concept they had begun to work on would fit. In this way, it was also reasoned, that the concept proposal could have better opportunities of being eventually being realized.

Interview questions for designer Jorma Vennola

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1. Where were you born? When?
 2. What is your education?
 3. Could you please describe the most relevant steps in your career?
 4. How you consider your work approach: artistic or industrial design oriented?
 5. What's you're favorite piece?
 6. How do you consider this? Is it more as an artistic or design work?
 7. Could you use the story of one object to explain the process from the idea, to the creation, until the usage in everyday life?
 8. What role did the users/salespeople/company had in this design process?
 9. Are there any "periods" that can be found in your work? (in terms of time/material/shapes/uses/approaches)
 10. How was the relation with the companies you were working for? Did they ask you for a specific design or was the designer free of proposing?
 11. Is there any reason why you decided to start your career in the USA? Has this affected your design somehow? (in terms of themes/works/way of thinking/...)
 12. How do you relate to your work? (Do you see it as self-expression, expression of passion, as a job, or an exploration, or as a challenge...)
 13. You have used lots of very different materials in your career. Is there any reason? Is the design process significantly different according to the materials used?
 14. What do you think is the role of a designer, come up with ideas, make proposals and then let someone else technically realize them or should a designer be able to realize the products he designs?
-

Table 1: These questions were used to create audio-visual documentation of designer Jorma Vennola for the Audio-Visual archive project with Design Museum Helsinki.

Overall, the student's observations in the museum lasted between 2-3 days. Among the highlights cited were how (in their opinion) the physical configuration of the building has a bearing on the possible form of the exhibitions. In one of the groups they also noted how the audience was more international than expected for that particular time of the year and this fact played a role in how the personas in the scenarios they created were designed. These included Petri, an 8-year old primary school student from Finland; Kenji a 21-year old college student from Japan; Luciano

a 52-year old tourist from Italy who is also a glazier by profession and Pekka a retired pensioner from Finland.

In addition to performing fieldwork in the museum's premises the students engaged in learning basic ethnographic skills by creating questionnaires to be used in interview session with the designer selected by each group. In the crafting of these data gathering devices they followed general guidelines for a semi-structured interview where "the respondent is encouraged to express himself or herself at length" (Collins 134). The students were encouraged to work independently and imaginatively. The resulting questionnaires created by each of the groups were different from one another. This might be a reflection of how each group perceived each designer differently. It might also relate to the differences in the media concepts being developed by each group. Table I shows one example of the questionnaires created by the students. In this case the respondent was the designer Jorma Vennola.

As the group was creating the audio-visual materials they explained, how because their design concept focused on portraying the designer's work using stories, the questionnaire that they created was designed with the objective of eliciting as many stories as possible from the subject. Figure 4 depicts the interactive installation concept designed by the students to would showcase and tell the stories about Mr. Vennola's work in the museum. The concept makes use of a structure to display both copies and originals from the designer's work.



Figure 4: Replicas of original design artifacts (with embedded RFID tags) and created with a 3D printer are displayed alongside originals (in the glass cases). The copies can be handled by the audience and are used to tell the stories of Jorma Vennola's design. Design by: Maria Luisa Bertazzoni, Juan Carlos Duarte, Markku Luotonen, Hsun Yu.

The replicas, that would be accessible to the public for handling, could be created using contemporary 3D fabrication technology and would contain embedded RFID tags. Placing one of these replica artifacts on an installation pedestal enabled with an RFID reader would trigger a projection that would tell a story related to the artifact. The replicas could also be sold as souvenirs in the gift shop.

Data for the archive: The interviews

In the end, the interviews with the designers were successful so that now there exists comprehensive audio recordings with knowledge about the life's trajectories of these noted individuals, their design practice as well as the contexts in which it was embedded. In the case of Mr. Olavi Lindén, since the interview took place at the Museum of Technology in Helsinki, there also exists good quality video documentation of the retrospective exhibition about his work that was held in 2012.

In addition to gathering the data, the students were asked to reflect about the work done in the project through two exercises. The first involved creating a timeline of the activities that they had engaged to complete the objectives of the project. The idea here was to make them aware of the progression and dependencies of the different activities. The second exercise concerned identifying and labeling the themes that arose throughout the interviews with the designers. The objective here was to provide an option for the museum curators to easily search through the materials as well as to begin considering the possible metadata tags that could be used if the material was ever annotated. Nevertheless, this final exercise was not completely successful, since not all of the groups followed the instructions, or completed the request. One group provided a full written transcription of the materials in the form of a photo essay. Another group created a timeline of the video materials, specifying what contents were to be found where. This group also created interpretive diagrams of the contents surveyed in the interview. The remaining groups completed their concept presentations and handed the audio-visual materials resulting from the interviews, with an accompanying trailer that gives an general idea of the interview.

Discussion: Heritage and design education

As both the record and the manifestation of human presence throughout history, cultural heritage artifacts belong to a special class of items deemed as representative of the practices, ways of life, and belief systems of human communities. But cultural heritage artifacts are not static entities. They assume different shapes and forms as they emerge as narratives that bring together the continued interaction, in time and space, of cultures, ethnic groups, and nationalities.

The cases presented here could be regarded as significant examples of research through and for design. The aims are to develop communication artifacts and interfaces that both disseminate and preserve the knowledge of the different communities that have created the heritage. Simultaneously, the aim is to further develop design education by creating a grounded practice where thinking is also about doing.

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Sources

Carroll, John M., Five Reasons for Scenario-Based Design, *Proceedings of the 32nd Hawaii International Conference on System Sciences*, IEEE Computer Society, Washington DC, 3051–3061, 1999.

Collins, Hillary, *Creative Research, The Theory and Practice of Research for the Creative*, AVA Publishing SA, Lausanne, Switzerland, 2010.

Fallman, Daniel, The Interaction Design Research Triangle of Design Practice, *Design Issues*, and Design Exploration, *Design Issues*, Vol. 24, No. 3, Summer 2008, 8-9.

Feste, Trygve, Feste, Haakon, Demystifying ‘Design Research’: Design is not Research, Research is Design, *Industrial Designers Society of America (IDSA) Education Symposium 2012*, Boston, MA, <http://www.idsa.org/sites/default/files/Faste.pdf>, (Accessed November 28, 2013.)

Gibson, James J. *The Ecological Approach to Visual Perception*, Lawrence Erlbaum Associates, New Jersey, 1986.

Jones, Chris Jones, *Design Methods*, John Wiley & Sons, Inc. New York, 1972.

Krippendorff Klaus, *The Semantic Turn, A New Foundation for Design*, Taylor Francis, Boca Raton, FL. 2006.

Lawson, Bryan, *How Designers Think, The Design Process Demystified*, Architectural Press, Oxford, 1997.

Pearce, Susan, Thinking about Things, *Interpreting objects and collections*, Routledge, New York, NY, 1994.

Norman, Donald, *The Design of Everyday Things*, Basic Books, 1988.