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SOCIAL COHESION DESIGN, A COURSE FOR DESIGNING COMMUNITY INTEGRATED PRODUCT SYSTEMS

C. de Lange, T. Wiegers, J. Vergeest

Abstract
Design students are typically not educated in systematically including aspects of social cohesion in their designer practise. This paper describes the Social Cohesion Design course, an explorative project at the faculty of Industrial Design in Delft. The course aims at developing so called "Community Integrated Product Systems" for enhancement of social cohesion among community members, unlike mainstream industrial design with its focus set on an individual product-user experience. The course applies a new designer approach, the so called 3-I methodology, and constitutes part of a multi-stakeholder project in which students conduct street furniture assignments with human science-students for a real company for a real district in collaboration with the municipality, the district team, the housing corporation and the residents involved.

Keywords: Social Cohesion Design, Community Integrated Product System, 3–i Methodology, 'Face to Face' contact, Q-board Interview, Multi Disciplinairy, Scenario.

Introduction

There has been much concern in the last few decades about the social breakdown in Western societies. Social as well as medical reports indicate that our social fabric is disrupting having all sorts of negative impact of the members of the community to participate in voluntary work, politics, associations and on their physical health conditions [1,2]. Technology is seen as having an active role in this. A TV set binds people to their homes less visiting friends. A micro wave facilitates family members to eat at different time intervals less socialising at the dinner table. The increase of social media has a vast impact on decline of 'face to face' contacts.

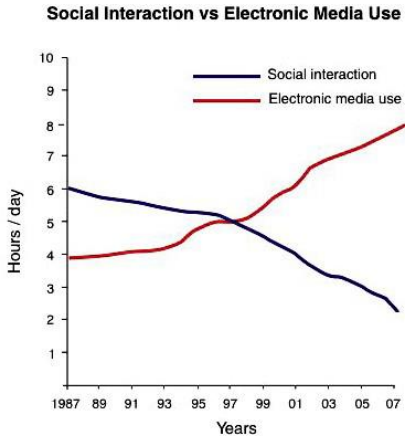

Figure 1. Social Interaction vs Electronic Media Use [2]

One of the most pronounced changes in the daily habits of citizens is a reduction in the number of minutes per day they interact with another human being face to face. In less than two decades, the number of people saying there is no one with whom they discuss important matters nearly tripled. These facts lead to the main question the paper addresses: Can designers develop technology projects that enhance social cohesion?

Course history

In 2009 De Lange, lecturer at the faculty of Industrial Design Engineering and director of the Social Cohesion Design Foundation (SCDF) in Delft developed the Social Cohesion Design course to educate design students in including aspects of social cohesion in their design practise. At the time typing in the words: 'Social Cohesion', and 'Design' in www.google.com produced zero hits. The course was named "Social Cohesion Design" stressing the starting point of the course that social cohesion is designable. The course introduces new design concepts and a new research tool inspired by Stephenson's Q methodology [3]. During the period of 2012-2014 the focal point of the course became the development of street furniture projects in Delft districts to stimulate 'face to face' contact between residents. The course is set up as a multi stakeholder project, organised by De Lange's SCDF, including students from different schools and universities, the municipality of Delft, its residents, the housing cooperation, and the street furniture manufacturers involved.

Explorative course development project

According to Heidegger: "the essence of technology is by no means anything technological" [4]. The essence of technology is how technology presents itself in time, how it reveals its impact on for instance social interaction among members of a community exposed to the technology. This insight is considered the "raison d'etre" of this course development project since its intention is to start from the impact as envisioned by the designer and works back to the creation of a material design. The essence of the design as such is not the design itself but the Social Cohesion it provides. Since there was no model for a Social Cohesion Design course to draw from, new concepts had to be developed.The course introduces two new concepts: the CIPS, the concept of a: "Community Integrated Product System", and 3-i Methodology, the logical framework of the course. Furthermore additional sub-concepts were developed to support the logical framework such as: 'Setting X', '3D Scenario Board', 'Q Board research', 'Sub-scenario Matrix Tool'.

Community Integrated Product System (CIPS).

A CIPS can best be seen as a product-embedded-community-structure providing community members the facility to pro-actively meet 'face to face' with other community members while using, maintaining, designing, promoting etc. the product at hand. This pro-active aspect of CIPS design is seen as one of its main assets, since it helps to provide 'capabilities' to community members for social interaction and wellbeing as expressed by Sen [5]. As such CIPS design clearly distinguishes itself from "mainstream" product design with their focus set on a user-product experience. CIPS design in the end is about people having 'face to face' contact with other people beyond the product-user experience. Furthermore, CIPS design is considered in line with the trend in western economies to shift from 'goods-dominant' economies to 'service-dominant' economies as described by Varga and Lusch [6].

3-I Methodology

The course methodology is called: 3-i. 3-i represents the three stages in the course that comprise the CIPS design process: i-1 the Identification stage, i-2 the Integration stage and i-3 the Implantation stage.

I-1:

In the i-1 stage students visit and explore the community of their assignment and try and identify elements (a school, households, a shop, an elderly home, a community center, etc.) in the community that may play a role in a future CIPS scenario. Based on their choise of elements they define their “Setting X” and make a maquête of this community. This maquête is called the “3D Scenario Board” as it refers to envisioning, and communicating scenarios with stakeholders and experts involved such as the district team, the district residents, the housing corporation and guest-students from human science.

Figure 2. Students discuss scenarios at the 3D Scenario Board.

Setting X may be the entire neighbourhood, a part of the neighbourhood, a housing block or row of neighbours in a street, depending on the students perception of their target community. The scenarios in the future CIPS may best be clarified by a schematic

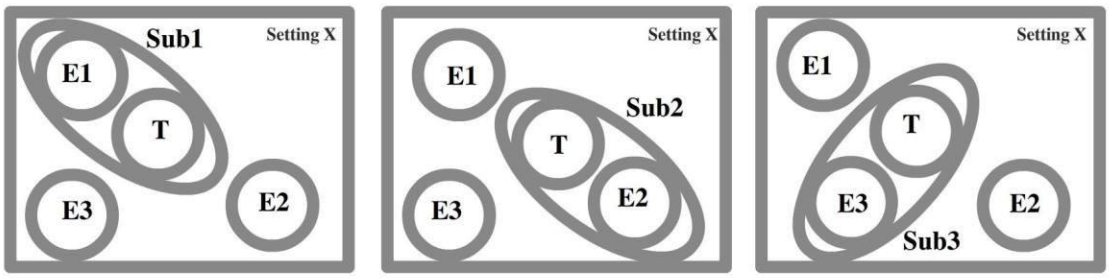

Figure 3. Schematic representation of 3 subscenarios in Setting X.

representation. E1, E2 and E3 represent the selected elements in Setting X. T represents the future technology. The ellipses represent the subscenarios including elements and technology.

I-2:

In the i-2 stage the students discuss these individual scenarios using their 3D Scenario Board and try and blend them into a main scenario. At this stage they are assisted by students from Human Science who join the design students in so called ‘Inspirational Multi-Disciplinary Sessions’.The idea being that Human Science students have a different view compared to technical students when looking at the same issue.

Collaboratively they develop and formulate the 'mainscenario' that the IDE students use as a starting point for their material design process: the process of ideation, sketching and modelling as in classical "mainstream" industrial design.
I-3:
In the i-3 stage the team works out a "Branding, Promotion and Pilot Plan (BBP)" in collaboration with the experts in the community such as the housing corporation, the district team and the district residents for the realisation of their CIPS. The BBP plan contains a step by step manual for the realisation of the project in the neighbourhood by the company, the district coordination team and the district residents.

Q Board Interviews
To receive feedback on their scenarios, concepts and plans from the stakeholders, students conduct 'Q board Interviews' as inspired by Q Factor Analysis. Based on these Q results they work out their scenarios into concepts and elaborate on technical construction details, outline a cost-estimation for the production and testing of a prototype and work out a 'step by step' manual for the district team and the local stakeholders involved.


Figure 4. Conducting Q Board interviews.

Lectures, student-presentations and course assessment
During the 10 weeks course, the students attend lectures on basic course concepts such as Social Cohesion, CIPS, 3-I Methodology, Q board Interviews, and other course concepts. The final presentation is a public presentation held in front of a jury consisting of residents of the neighbourhood for which they conducted the assignment. Best team wins the so called "Wise Owl Award". This design is to be realised. The final CIPS design of the students is assessed by the coaches on their perceived impact on 'face to face' enhancement in the district and on its design and feasibility qualities.

Results so far
In 2010 the course took off with a CIPS assignment for a slum


Figure 5. Pedal Power LED concept 2010


Figure 6. Garbage collecting concept 2010

settlement in the ‘Base of the Pyramid’. CIPS concepts were developed for a Community Integrated Pedal Power Game System where students envisioned community members to collaboratively pedal power in a playful way to charge their batteries to run their LED lamp, and for a Community Integrated Garbage Collecting System where materials were sorted out and distributed among workshops to fabricate new products such as bags.
In 2011 the students had to design a CIPS assignment for a coffee-distribution project for the TU Delft campus to enhance social contact between staff members. The assignment was conducted for a real company, Douwe Egberts. The CIPS concept was based on a new type of ID cards containing information about personal hobbies. Staff members log in and a common theme of interest is shown on the top display to provide a topic for a ‘face to face’ chat.

Figure 7. Coffeemachine concept for Douwe Egberts 2011

In 2012 and 2013 the assignments concerned the CIPS developed of street furniture projects for a real neighbourhood in Delft and for a real manufacturer of street furniture. The students developed a CIPS concept for LED lighting in flats to provide residents the “capability” to collaboratively design a light color composition.

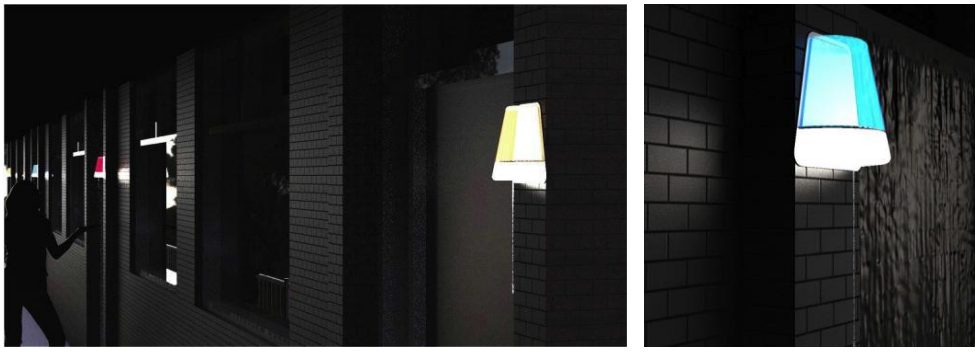

Figure 8. Lighting concept for Maiken 2013

Conclusions and Recommendations

A lot of explorative research in this course development project still needs to be done. However, a first step in the ‘long and winding’ journey to a fully Integrated multi-stakeholder project has been made. As far as including schools and universities in this course is concerned, the main challenges are the incompatibility of the educational programs, the scedules, the studyload and the course validation, the number of Ects involved.
In this course inviting guest students from human science as experts to join ‘inspirational sessions’ may very well be a practical solution for providing Social Cohesion Design

students with the opportunity to learn from and communicate with students with a different mindset and to receive the necessary human science input in their design project. As far as including real companies in the project is concerned, no major problems were encountered and companies were easily selected on their keen interest to learn a new design approach and the new 'mindset' that comes along with it. Including stakeholders from the municipality, the district residents, the coordination team and the housing corperation involved we do not consider the main challenge in this project as they are eager to get new ideas for social enhancement and upgrading of their district. Financing of the projects to be realised in the district however is a major challenge and as such forms the major bottleneck for testing the results of the course and the methodology in practise.

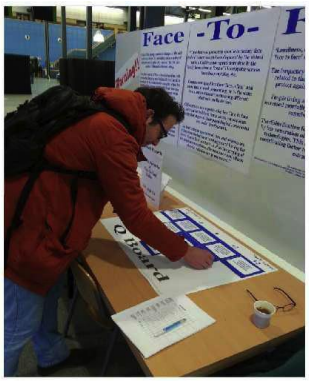

Figure 9. Q Board interview station

As far as the students are concerned they appreciate the collaboration with students from different universities and background and there is a general consensus among them that impact of technology projects on social cohesion must be considered. Only recently we did a Q board research project called "Warning Face to Face Decline" at our faculty where 76 students, randomly chosen from approx. 300 students entering the faculty hall and passing the Q Board station in the period 2 - 5 december 2013, were asked to rankorder 9 statements referring to impact of social media, policy making, role of philosophy, and other contemporary themes. Highest ranked:

"A design is not complete if its social impact is not considered".

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