How Social Media Changes User-Centred Design

Cumulative and Strategic User Involvement with Respect to Developer–User Social Distance

Mikael Johnson

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User-Centred Design

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Aalto University
School of Science
Department of Computer Science and Engineering

Supervising professor
Prof. Marko Nieminen

Thesis advisors
Prof. Marko Turpeinen
Prof. Sampsa Hyysalo

Preliminary examiners
Prof. Robin Williams, University of Edinburgh, UK
Prof. Dag Svanæs, Norges teknisk-naturvitenskapelige universitet,
Norway

Opponent
Prof. Jan Gulliksen, Kungliga Tekniska högskolan, Sweden

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Abstract

The aim of user-centred, participatory, and lead-user design approaches is to raise the quality of products and services through methods that aid developers in user involvement. In the literature, the design context is often assumed to be 'one-off projects', which limits the applicability of the guidelines for further service design after market launch. Other challenges concerning social media include ambiguities in the role of informal engagement, the abstraction processes between millions of users and working user categories, and criteria for involving users.

This study investigated user involvement strategies and practices in the construction of a social media service. The research questions were (1) how do users' actions in and around social media shape its design after market launch, (2) how do social media developers' user involvement practices evolve over time, and (3) how does user categorisation change with social media? This thesis adopted an exploratory case study approach and the data was collected during 2003–2010. While the study is grounded in usability research and human–computer interaction, the theoretical and methodological framework leaned on science and technology studies.

The site of investigation was one of the world's largest social game and online communities for teenagers, Habbo Hotel, operated by Sulake Corporation. The data was gathered from developers and users through a multi-method approach, using traditional qualitative and quantitative methods as well as online data sources. While this study offers unique insight into the interaction between a particular social media company and its users, the implications go beyond the studied target group and games to social media in general.

The key findings demonstrate how collaboration and feedback loops between developers and users change over time. In particular, this study highlights the effects of changes in the target group, the broad variety of applied user involvement methods, rhythms in development, and users' contributions after market launch. The author developed two concepts, 'developer–user social distance' and 'content creation capacity', to help designers and researchers communicate previously neglected dimensions of user involvement. Results from analysis of the accumulation of user knowledge in the development organisation criticise assumptions in the literature on when and how designers categorise users as well as the functions of these user categories in the design process. The results further suggest that guidelines and other advice on user involvement should be uncoupled from the assumption of stable and orderly project phases. This case contributes to user-centred design guidelines, process guidance for user involvement, and research on social media development and developer–user collaboration.

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Sammandrag

Författare
Mikael Johnson

Doktorsavhandlingens titel
How Social Media Changes User-Centred Design: Cumulative and Strategic User Involvement with Respect to Developer–User Social Distance

Sammandrag

Genom att inkludera användare i designprocessen kan systemutvecklare höja kvaliteten på produkter och tjänster. I de främsta metoderna på området, användarcentrerad och deltagande design samt engagemang av "lead-users", utgår man ofta ifrån att designprocessen gäller enskilda projekt, vilket begränsar tillämpningen av metoderna för fortsatt tjänstedesign efter marknadslansering. Vidare utmaningar inom sociala media är oklarheter kring informellt engagemang, praktiska abstraktioner av miljoner användare samt kriterier för användarmedverkan.

I denna studie undersöktes strategier för användarmedverkan och praxis i konstruktionen av sociala media. Frågeställningen var (1) hur användares aktiviteter i och kring sociala media formar dess design efter marknadslansering, (2) hur användarmedverkan utvecklas över tid och (3) hur användarkategorisering förändras i och med sociala media. Avhandlingen är en undersökande fallstudie och materialet sammanställdes under 2003–2010. Medan studien är förankrad i forskningsområdet människa–datorinteraktion och begreppet användbarhet, utgår den teoretiska referensramen också från samhällsvetenskapliga teknik- och vetenskapsstudier.

Platsen för undersökningen var en av världens största sociala spel och mötesplats på nätet för tonåringar, Habbo Hotel, som drivs av Sulake Corporation. Uppgifterna samlades in från utvecklare och användare genom olika metodansatser. Både traditionella kvalitativa och kvantitativa metoder samt källor på nätet användes. Trots att fallstudien ger en unik insyn i interaktionen mellan ett specifikt företag och dess användare inom sociala media, går implikationerna längre än till den undersökta målgruppen och spel, dvs. till sociala media i allmänhet.

De viktigaste resultaten påvisar hur samarbete och feedback mellan utvecklare och användare förändras över tid. I synnerhet belyses effekterna av förändringar i målgruppen, bredden i tillämpningen av metoder för användarmedverkan, rytmer i utvecklingsprocessen samt användarnas insatser. Författaren utvecklade två begrepp, "socialt avstånd mellan utvecklare och användare" och "kapacitet att skapa innehåll", för att hjälpa utvecklare och forskare att kommunicera tidigare försummade dimensioner inom användarmedverkan. Resultaten från analysen av hur kunskapen om användare byggs upp kritiserar ogrundade premisser gällande när och hur utvecklare kategoriserar användarna samt användarkategoriernas funktion i designprocessen. Resultaten påvisar också att riktlinjer och rekommendationer om användarmedverkan bör utvecklas utan premisser om stabila och välordnade projektfaser. Denna fallstudie bidrar till riktlinjer inom användarcentrerad design, processvägledning för användarmedverkan, forskning om utveckling av sociala media och samarbete mellan utvecklare och användare.

Preface

The point of no return passed in the fall of 2005. I realized that I had read enough theoretical texts to put my mind at ease about 'the user'[1] and that I had enough data to complete my thesis work. However, the research project was going to give me yet another Easter egg: instead of finalising my thesis during the third year of the project, I got an opportunity to engage even more deeply with my case organisation and its service users. The benefit was access to additional research data about user feedback in the organisation's internal processes, but the drawback was having less dedicated time to write up my insights. I was uncertain about continued funding, but my research ambition, privileged data access, and prolonged commitment had fused into a mix of passion and obligation: I could not *not* write my thesis anymore.

This turn of events eventually led to my participation in a series of research projects with interesting people and topics, but where my thesis work often remained a sidetrack. With 'too much data' on my hands I then pursued occasional collaborative writing projects that helped me sort out my thoughts and explore different angles to the research phenomenon. The year 2010 became a good year as I received a small scholarship to complete the thesis and a more than permissive research project started soon after, which let me continue the finishing touches for as long as I needed.

After many more months, even years, than originally planned, this thesis has finally found its shape. I am indebted to many who have helped me on the way. My first research influences came from the (no longer active) Information Ergonomics Research Group that mixed software engineering, user interface design, usability research, and cognitive and social psychology. I arrived at a time of change and inherited the research projects that my supervisor, Marko Nieminen, had set up for himself, as he became acting professor at the usability and user interfaces professorship at Helsinki University of Technology. Thank you for letting me on-board and into the fascinating research projects.

I am particularly grateful for the support from my advisors. Marko Turpeinen organised the Mobile Content Communities (MC^2) research project, which opened the doors to the software development organisation that became my case study, and he supported me with clear thoughts on social media and research funding. Sampsa Hyysalo took me under his wings and made it his business to see that my thesis got done. Thank you for your early and continuous interest and encourage-

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[1]At that time I was puzzled with the mismatch between engineering talk about the user and most of the available social and behavioral science theories for understanding people that I had learned of in my studies, projects, and various academic reading circles.

ment, as well as the research funding and patience in the end.

Parts of this thesis could not exist without my dear co-authors, whom I wish to thank for their contributions. Kalle Toiskallio shared the early Habbo experiences with me and guided me through the sociology of community. Vili Lehdonvirta showed me why I could not ignore the economics of virtual worlds and got me acquainted with the relevant economic theories and models together with Terhi-Anna Wilska. Tanja Sihvonen and I explored whether a 'nice' place like Habbo could be gothic at the same time, while she enlightened me about subcultural studies. Sakari Tamminen and Sampsa Hyysalo form a fantastic duo on any social theory, both with their own well-argued perspectives, and this time we managed to write up our thoughts on the relevance of symbolic interactionism to virtual worlds.

I wish to acknowledge the participation of all the kind Habbo people who let me interview and survey them. Both the ones working at Sulake, who created Habbo, and the active Habbo users who voluntarily took part in this research. For reasons of research anonymity I cannot mention you by name, but I wish to express my appreciation for letting me interview you, politely considering my questions and providing me with answers that always enlightened me and exceeded my expectations. My special thanks are extended to the research coordinators, who managed our collaboration: Reetta Pietiläinen, Sampo Karjalainen, Emmi Kuusikko, and Marjoriikka Ylisiurua. During the research process I had the opportunity to exchange thoughts with fellow Habbo researchers—Sebastian Sihvola, Aleksi Koskinen, Vili Lehdonvirta, Jani Merikivi, and Minna Ruckenstein—thank you for the insightful collaboration.

I have been fortunate in having a good academic entourage, who taught me the academic ropes. I thank my former IERG colleagues at Software Business and Engineering Institute—especially Sakari Tamminen, Toni Koskinen, Teemu Seppälä, Kati Hyyppä, Viljami Koskela, Kalle Toiskallio, and Päivi Pöyry—for all the fascinating discussions in the early days. I also appreciated the wider collaboration at the institute, including our 'scientific debate' meeting and the reading circles on information systems as well as postmodern IT design, which helped me avoid so many theoretical pitfalls. My first research project had a strong connection to Oulu University and I am grateful for the lessons on user-centred design and usability in organisational processes and cultures that you provided: Kari Kuutti, Samuli Saukkonen, Timo Jokela, Tonja Molin-Juustila, Netta Iivari, and Giulio Jacucci.

Through the MC^2 research project I transitioned from SoberIT to Helsinki Institute for Information Technology, where I was fortunate to be part of the Digital Content Communities research group and, while it operated, the Self-Made Media group. This research environment was a change from the research projects with a pronounced industry context at SoberIT to consumer products and increased my awareness of legal and economic concerns in relation to digital service development. Thank you MC^2 for introducing me to gaming, community, and content, especially the people at HIIT: Marko Turpeinen, Fernando Herrera, Kai Kuikkaniemi, Matti Rantanen, Timo Saari, Antti Salovaara, Risto Sarvas, Janne Vuorenmaa, Herkko Hietanen, Vili Lehdonvirta, Sauli Tiitta, and Esko Kurvinen. Thank you SMM for the always enjoyable research dialogue: Risto Sarvas, Asko Lehmuskallio, Vilma Lehtinen, Jaana Näsänen, Sami Vihavainen, and Kai Huotari. I

Contents

List of Publications

This thesis is based on the following publications, which are referred to in the text by their Roman numerals:

I   Mikael Johnson and Kalle Toiskallio (2005). "Fansites as Sources for User Research: Case Habbo Hotel". *IRIS'28 Conference. The 28th Information Systems Research Seminar in Scandinavia*. Kristiansand, Norway, August 2005.

II Mikael Johnson and Kalle Toiskallio (2007). "Who are the Habbo Hotel Users—and What are they Doing There?" *Nordic Consumer Policy Research Conference 2007*. Helsinki, Finland, October 2007.

III Mikael Johnson (2007). "Unscrambling the 'Average User' of Habbo Hotel". *Human Technology* 3 (2), 127–153.

IV Vili Lehdonvirta, Terhi-Anna Wilska, and Mikael Johnson (2009). "Virtual Consumerism: Case Habbo Hotel". *Information, Communication and Society* 12 (7), 1059–1079.

V   Mikael Johnson and Tanja Sihvonen (2009). "On the Dark Side: Gothic Play and Performance in a Virtual World". *Journal of Virtual Worlds Research* 1 (3).

VI Mikael Johnson (2010). "User Involvement, Social Media, and Service Evolution: The Case of Habbo". *43rd Hawaii International Conference on System Sciences*. Kauai, Hawaii, January 2010, 1–10, (Nominated for Best Paper Award).

VII Mikael Johnson, Sampsa Hyysalo, and Sakari Tamminen (2010). "The Virtuality of Virtual Worlds, or What We Can Learn from Playacting Horse Girls and Marginalized Developers". *Symbolic Interaction* 33 (4), 603–633.

Author Contributions

Articles I and II are written in collaboration with Kalle Toiskallio, with whom the author collaborated on a daily basis in 2003–2005. Article I is based on the author's idea, study design, data collection, analysis, and writing. In article II, Toiskallio contributed to the study design, participated in data collection, and commented on the analysis and the article text, written by the author.

Articles III and VI: The author is solely responsible for everything.

Article IV: The author provided supporting research data and contributed to the analysis and with comments on the text, mainly written by Lehdonvirta.

Articles V and VII: The author was responsible for the study design, data collection, related research on virtual worlds, figures, writing of case descriptions, and examples. The idea and analyses emerged in joint collaboration with the co-authors, who also contributed with data interpretations and theory from the behavioural and social sciences.

1

Introduction

When technological breakthroughs happen and new categories of products and services become established in society, it becomes urgent to assess their impact on people's everyday lives. Equally important is the assessment of how different people influence the development of the new product or service. Contrary to common belief, technology is not shaped by scientists and developers alone, but users and various intermediaries (e.g., distributors, dealers, sponsors, advertisers, etc.) play a significant role.

Before we delve into the roles of users, the notion of the 'user' deserves a little attention. While 'user' is a common and integral term in the professional language of engineering, architecture, and software development, it is also a complex idea: it does not always refer to particular human beings in flesh and blood, but also to organisations and, for instance, to someone who might use a system in the future, but has not yet been identified.[1] In addition, user is tightly coupled with software concepts like user interface, user profile, and user access rights.[2] Because of the deep roots of 'user' in design practices, the term is not easily substituted with participant, social actor, human, etc. (see section 3.1)—a change which at first glance might cast individual people in more appropriate social science light.

Social media are often said to be user-centred. By now it is clear that social media can be distinguished from traditional broadcast media, especially considering the greater proportion of the content that the users produce, the increased immediacy, and the smaller degree of professional editing involved in the social media setting. It is, however, less clear whether the existence of user-created content means that social media is user-centred or designed in a user-centred way? It is not obvious how these two (user-created content in social media and the value of user-centredness in product development) relate, because anything that takes place after market launch is not very explicitly considered in traditional thoughts and processes on user-centred design; see for instance this definition by the association for usability professionals:

> *User-centered design (UCD) is an approach to design that grounds the process in information about the people who will use the product. UCD processes focus on users through the planning, design and development of a product.*[3]

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[1]Stewart and Hyysalo, 2008.

[2]Grudin, 1993.

[3]Usability Professionals' Association, n.d.

where, for example, actual use, operation, maintenance, re-development, redesign, are missing in the definition.

The role of users is very well outlined in three prominent approaches to user involvement: user-centred design, participatory design, and lead-user innovation. In user-centred design users are assumed to contribute through the means of user research, user requirements definition, context of use models, use case and scenario modelling, persona descriptions, and evaluation with users (section 2.2). In participatory design users are assumed to participate in design workshops and other co-design activities (section 2.3). From the perspective of lead-user innovation, people ahead of the market, so called lead-users, presumably create their own technical solutions and solve pressing problems, which can then be adopted and packaged as a product by companies (section 2.4).

Are the above roles of users valid in the context of social media? Social media is here understood as a particular design context, which is distinct from others based on the combination of (1) a specific kind of software business, (2) functionality for group communication, as well as (3) voluntary active user communities and peer production (section 2.5). Anecdotal evidence from social media startups suggest that many developers did not start with typical user-centred design methods, but rather by developing the service for themselves.[4] This would suggest that many social media startups have followed one particular lead-user pathway. However, many prominent social media companies have hired user experience designers and user researchers to learn from the users of their services. These weak signals intrigue us and lead to the question, what exactly is the role of users and user involvement methods in the design of social media?

User involvement can be thought of in two ways: either how to manage a particular interaction situation with one or more users, or the planning process when one decides how to approach users. We know a lot about particular methods to learn about users—interviews, observation, surveys, focus groups, and so on—and a fair deal about which factors drive the use of a method in research settings. However, we know very little about the factors that drive the selection of methods use in the long run, in a series of projects in product or service development organisations.

In usability and user-centred design so far, a number of factors that influence method use have been proposed. One standard of method selection criteria[5] lists a number of factors structured by software lifecycle, project, user, task, and product characteristics, as well as available skills. For instance, does the designer have access to users or are they too remote—geographically or organisationally? What ergonomics/human factors skills does the design team have? How much time and money is available? And is it in the beginning, middle, or end of a project?

These contextual factors that shape the selection of user involvement methods all make sense, except for one. It looks like the characteristics of software development for social media reframe the role of project phases (in the software lifecycle: acquisition and supply; development: requirements analysis, architectural design, qualification testing; maintenance-operation)[6] as a driving factor. In addition, I

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[4]Holzapfel, 2008.

[5]ISO, 2002, Usability methods supporting human-centred design, ISO/TR 16982.

[6]ISO, 2002, There are many small variations of the software lifecycle process description and it is

will propose that ongoing software development in a social media context has additional advantages, like new sources for data about users, so far neglected by the previously mentioned standards.

Why should one care about these shaping factors, and when does one need to pay attention to them? Guidelines and method resources are important in capturing and communicating design knowledge grounded in practitioner experience and research. Since there is no lack of methods, but rather an oversupply—some have even called it a 'methodology jungle'[7]—the ways that these shaping factors structure method resources are important for successful method selection. The risk is that poorly structured method resources lead to suboptimal method choices, resulting in reduced impact of user involvement. The context factors are relevant in the early stages when a project takes form, when one assesses what kind of project it might be, its potential benefits, and importance for the organisation. Also, the factors become key to the detailed planning of the project, when one needs to sort out the nitty-gritty details of engagement with users. Finally, the factors are significant in the post-mortem analyses of the project, when one assesses what went right and what could have been done better. It is the effective and learning organisation that needs to care about these matters.

The emergence of social media has had a significant effect on software business and related products and services (e.g., product characteristics in the abovementioned standard). Software started out in the 1950s as something expensive that only big companies or the government could afford. The mainframes of the 1960s turned the business around as much as the personal computer did in the 1970s and 1980s. The Internet changed the distribution of software in the 1990s. Engineering efforts of miniaturisation, increased speed of interconnected parts, and mobile and widespread networks allowed for the home computer and mobile devices in the 2000s to shape and cater to new customer groups. Recently, social media changed the software business, or at least parts of it. Some parts have always remained as they were before, while other niches have gained a stronger foothold in the reigning ways of making business in the software landscape.

The question of the role of the users in product development has been asked before in many different fields with somewhat varied answers related to different technologies. Business books on social media often point out the role of collaboration, scalability, open source, new functionality, and a viable business model.[8] However, they are very unclear about the specifics of user involvement and user experience. Open questions includes such fundamentals as how customer dialogue and user feedback evolves over time and in changing contexts.

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difficult to find a canonical one, for instance ISO/IEC 12207 defined 43 system and software processes, of which ISO 16982 selected the mentioned ones to cross-tabulate usability methods with.

[7]Avison and Fitzgerald, 1988; Iivari, Hirschheim and Klein, 2001.

[8]Anderson, 2006; Osterwalder and Pigneur, 2010; Tapscott and Williams, 2006.

1.1 How Does User Involvement Change with Social Media?

Before going into the main traditions of user involvement, I will introduce the notion of **user categorisation**. The first step of user-centred design and similar approaches is to identify and categorise potential future users. This is typically done to complement market segmentation and product differentiation. Market analysts pursue market segmentation to forecast marketplace acceptance of products and services, and often base their analyses on demographics and consumption patterns.[9] Such analyses give a basis for interaction design, but designers often supplement them with analyses of current and future use practices, which is the foundation for scenarios, personas, user stories, storyboards, use cases, and so on. There is no commonly agreed on umbrella concept for these use-based analyses, but here I group them together as user categorisation. I draw on the concept of categorisation instead of classification to acknowledge that the categories we create to understand the world can be conflicting and overlapping, whereas classification 'involves the orderly and systematic assignment of each entity to one and only one class within a system of mutually exclusive and nonoverlapping classes'.[10]

The idea behind the techniques of user categorisation is to open up the concept of the user to nuances so that technology is not designed for an average user, which in the end might not suit anyone in particular. On the other hand, too many user categories cannot drive the design, because that would make designers torn in too many directions. It is considered good design practice to design for a few selected users: 'a given product will have a an informative suite of about five or six personas of which we will focus our design on one or two'.[11] Sometimes developers discuss various user categories as their future target groups or audiences, other times[12] different designations of users become a question of representing various established user groups in design.[13]

User-Centred Design, Usability, User Experience

There has been significant theory and methods development during 1990s and 2000s in the fields of user-centred design, usability engineering, and user experience. Early approaches in the 1980s were based on usability evaluation, then user-centred design turned to the social and contextual, business processes, user experience, and recently to value- and activity-centred design. Many methods

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[9]Kotler, 1997.

[10]Jacob, 2004, p. 522.

[11]Gaffney, 2006, Personas and outrageous software—an interview with Alan Cooper.

[12]User categorisations are but a small segment of the much broader concept of user representations, which is one of the most cited concepts in science and technology studies that focus on the design–use relationship. The concept of user representations enable a multitude of analyses, e.g., of users' ability to influence a design, of the resources for creating user representations (market research, user panels, visions, myths, experts, product demand, etc.), of the quality of a user representation (is it representative?), and of the various material forms of representation (reports, sketches, pictures, video clips, formal notations, etc.). See Akrich, 1995; Hyysalo, 2004; Williams, Stewart and Slack, 2005.

[13]Akrich, 1995; Carroll, 1995.

books have emerged, several each year, and the approaches have reached consensus enough to become standardised by the International Standards Organisation (ISO), which has an authoritative role in engineering, especially related to certification, material, and process standards.

Despite a growing body of literature, conferences, and workshops, not much is known about the actual practice of user-centred design in design and development organisations. The user-centred design literature is based on normative methods books and lessons learned, but there is very little method-validation research. As Rogers noted, it appears that most user theories and methods suffer from the toothbrush syndrome: 'fine for you to use but no one else is very interested in using it'.[14] There are more than 10 widely cited national and international surveys on user-centred design and user experience practices in companies, but in most cases they only scratch the surface.[15] There are several researchers and consultants performing usability maturity assessments, but while the results are sometimes published, most research discusses how to conduct the assessment, leaving out the details of the design practice for business confidentiality reasons.[16] With a few exceptions,[17] case studies on user involvement are very dispersed and their combined contribution to the field remains unclear, despite significant potential.

Over the years, consensus has emerged that it is a good idea to involve users, learn about their needs, and spend time early in the project to understand user requirements. While there are a few common and fairly generic user-centred practices—user studies, user feedback and testing with users—the actual details remain debated. Is it enough to meet real users over a cup of coffee or are formal research methods necessary? For instance, contested assumptions are that

- a user-centred design project always starts with a field study,[18]
- and a usability evaluation is necessary for product success.[19]

Other fundamental, but less-researched, assumptions about user-centred design, usability, and user experience are whether

- user involvement follows the same design phases from project to project,[20]
- only observed and well-documented user actions or speech can be used as design input,[21]

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[14]Rogers, 2004.

[15]Andreasen, Nielsen, Schrøder and Stage, 2006; Bygstad, Ghinea and Brevik, 2008; Dillon, Sweeney and Maguire, 1993; Følstad, Jørgensen and Krogstie, 2004; Gulliksen, Boivie and Göransson, 2006; Gulliksen, Boivie, Persson, Hektor and Herulf, 2004; Hussain, Slany and Holzinger, 2009; Nørgaard and Hornbæk, 2006; Venturi and Troost, 2004; Vredenburg, Mao, Smith and Carey, 2002, Of these, most cited are the ones by Vredenburg et al. and Gulliksen et al., according to Google Scholar in early 2012.

[16]Jokela, 2004.

[17]Bargas-Avila and Hornbæk, 2011; Righi and James, 2007.

[18]Norman, 2006.

[19]Greenberg and Buxton, 2008.

[20]User-centred methods guidelines and advice are commonly structured according to project phase, see ISO, 2002; Maguire, 2001b; UsabilityNet, 2003.

[21]Many user-centred design approaches have a bias on formal methods and design rationale, e.g., Beyer and Holtzblatt, 1998, whereas the role of informal engagement remain unclear.

- users can be abstracted into a manageable number (below 10) of typical users or user groups,[22]
- and particular methods are needed and can be developed for user-centred design purposes.[23]

Participatory Design

Participatory design has broadened its scope since its early trade union activist origins of new technology and work democratisation of the 1970s and 1980s. The biannual Participatory Design Conference joins together both designers and people intrested in user involvement without a design or product development background. The contributions from this research field do not form any one-size-fits-all approach, but rather offers sensibility for tackling politics in design and a smorgasbord of design workshop methods and techniques. Research in participatory design is often case study based, but a few method frameworks have been developed (e.g., MUST[24])

Social media brings to forth a number of issues that have both challenged and developed the traditional methods of participatory design. First and foremost, there is the question of scalability of the approach as the number of participating users increase. Put in more detail, in a social media context, can we still assume that

- the form of user participation is equal to being active in face-to-face meetings and workshops with developers, or observing and engaging in their activities,
- it is (timewise) possible for a design team to involve all relevant users and listen to their opinions,
- detailed knowledge about and localisation to organisational context of use (work processes) is key to product success, as opposed to standard product packages, and
- the target organisation and users are known and stable within the participatory design project timeframe?

User Innovation Research & Lead-User Methodology

User innovation research has managed what many user-centred and participatory design advocates have not: to attract the attention of business people and policy-makers. In contrast with the dominant belief in economics, user innovation research has revealed that a significant part of advances in technology stem from developments and modifications by users, not from R&D departments, researchers, or designers.[25]

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[22]The Personas method suggested by Cooper, 1999, retains that 5–6 personas are enough. In a broader sense, the role of user categorisation in design is unclear, especially in new contexts like social media.

[23]This harks back to debates about appropriate scope of user-centred design efforts: Is it a particular method, a process, or also a way of organising practice and attitudes? Compare, for instance, the ISO 13407 standard approach with Gulliksen's broader scope, see Gulliksen, Göransson, Boivie, Blomkvist, Persson and Cajander, 2003; ISO, 1999.

[24]Bødker, Kensing and Simonsen, 2004.

[25]Hippel, 1988; Hippel, 2005; Hippel, Thomke and Sonnack, 1999; Lüthje, Herstatt and Hippel, 2005.

However, the lead-user methodology focuses on a fairly narrow group of users, which leaves out other user groups and the role of users after market launch of a product or service. Research on social media gives reasons to believe that other users, in addition to a few active lead-users, also play significant roles in later innovation stages as well.[26] Dominant assumptions appear to be that

- the majority of the users is not significant to innovation, only lead-users are,
- the product concept stays the same for the whole market lifecycle, and
- laggards need more or less the same thing as lead-users and early adopters.

Challenges for Research

To sum up, despite a great deal of user involvement knowledge in several fields, there are a few problematic issues that pose challenges for research:

User categorisation. The outlined approaches—user-centred design, participatory design, and lead-user methodology—have different strategies for selecting the sample (chapter 2), but what becomes of these strategies in the context of social media? Software services are now used by millions of people, not hundreds or thousands like in the 1990s, and not much is known about how this has influenced the ways that developers consider users. Is the individual still an adequate level of abstraction for user categorisations, or are groups of users or subcommunities more suitable? How do the new social media opportunities for data about users shape user categorisation practices? How can and should the organisation talk about the users, and which user groups can steer the design best? Which user voices will be heard, which will be contested, and which will fade out to noise?

Dynamics beyond the scope of one project. A dominant way of structuring the use of methods to learn about users and co-design with users has been to use project phases more or less tied to the so-called software lifecycle (acquisition and supply; development: requirements analysis, architectural design, qualification testing; maintenance-operation). Very little is known about user involvement practices beyond the scope of one project. How does user involvement evolve over time? Can one rely on informal engagement with users or are formal user involvement methods necessary? Which aspects shape user involvement method selection? How do the roles that the users perform change between projects?

Pathways of user-created content and contributions. User-created content stirred up many debates when Blogger, Flickr, YouTube, MySpace, Digg, FeedBurner, Second Life, and similar services became societal phenomena. The service developers had not only created text-, photo-, video- and audio-sharing systems, but also publication systems. What one user did and contributed to the service became available to other users and contributed to their experience of the service. The fact that users are creative and contribute to social media is not news to anyone anymore, but what pathways do these user contributions take? If the users take an active role, how do their opinions and content shape the product, feature, and service to be? Can a user-created content perspective help answer the questions of what roles users play in social media and how they help make software work in practice?

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[26]Benkler, 2006; Bruns, 2008; Gillmor, 2004; Jenkins, 2006; Shirky, 2008.

<center>• • •</center>

1.2 Research Questions and Methodology

I started out with an interest in the process of constructing the user (section 3.1), which implies that one is not born a user, but becomes a user of a particular product or service. This perspective implies a distinction between the users as imagined by developers and the users who actually use a system, including an analysis of their interrelations. Given the research challenges presented in the previous section and my research interest, the overarching theme of this thesis became *the role of users and user involvement methods in social media.* Put more stringently, the research questions are:

1. How do users' actions in and around a social media service shape its design after market launch?

2. How do social media developers' user involvement practices evolve over time?

3. How does user categorisation change with social media?

Whereas the second and third questions are fairly straightforward, based on the above research challenges, the formulation of the first question requires a brief comment on how it relates to pathways of user-created content and other contributions. The first question is a variant of 'how does use shape design'? In many other design contexts only projected future use or limited use during evaluation influences a product, not actual use. This question intends to capture the intended and unintended effects to design of this actual use (including user-created content), which is fairly invisible in other design contexts with longer times between product updates, where users get to influence a product mostly *before* market launch, during concept design and testing, if at all. The formulation is intentionally broadened from use to 'actions in and around a service' in order to include actions by users that bend the limit of what can be understood as use, such as actions that are design oriented or complement the service offering (peer production).

Because of the unclear connection between literature and development practice, I chose to study real-life software development through a case-based qualitative inquiry. I also made a few other unorthodox choices about methodology. The user–developer relation is an understudied topic, since the literature is unfortunately usually divided into either research into design practices or research into the use of products and services.[27] In contrast, I chose to study both developers and users, as well as intermediaries. Also, I chose to make a long-term commitment to a case in order to study several iterations of design and use.

Institutionally this work is performed under the rubric of usability research—a core part of human-computer interaction (HCI)—at a department of computer science and engineering, but I also lean on a theoretical framework from the cross-disciplinary field of science and technology studies (STS). From this field I borrow the notion of users as co-constructed, in contrast to mainstream notions of users

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[27] Hyysalo, 2004; Hyysalo, 2010; Pollock and Williams, 2009; Voss, Hartswood, Procter, Rouncefield, Slack and Büscher, 2009; Williams, Stewart and Slack, 2005.

as psychological subjects (typical in human-computer interaction), social actors (information systems), participants (from participatory design), and lead-users (user innovation research).

Like many reflective HCI researchers, my ambition here is to surface the often unstated assumptions and values embedded in the research field itself and in the advice produced to inform design practice. Much research in STS concerns values in design, and here I draw on discussions about classification, stakeholder analyses, and a sensitivity towards materiality. The Biography of Artefacts framework (section 3.2) has guided me as I have followed particular Habbo features from their visionary beginnings through development, user feedback, and subsequent redevelopment.

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1.3   Data and Case Description

This study focuses on the user involvement practices of social media developers, exemplified by the developers at Sulake Corporation Oyj, who operate a social virtual world for teenagers called Habbo Hotel. The case study was started in 2003, as Sulake participated in a research project led by the Helsinki Institute for Information Technology. A longitudinal research approach made it possible to analyse user involvement in different stages of the service evolution, as both the company and user communities have grown. Initially the startup company began operations small, with hundreds of users, grew from microsize through small and medium organisational forms to an international corporation of about 300 employees with a user base of 10–15 million unique users per month.

While this study offers unique insight into the interaction between a social media company and its users, this case is representative beyond this target group and games to social media in general for a number of reasons. For instance, the case is typical with respect to software business characteristics, functionality for group communication, active user communities, and developers' non-traditional means of learning about users (following online use, discussions, and web analytics). From an innovation lifecycle perspective, this case is about the fermentation era, where technological variation is broad, and dominant designs have yet to appear.

Habbo is a virtual environment where children and teenagers meet, socialise, and play many types of games. It was first launched in August 2000 in Finland as Hotelli Kultakala ('Hotel Goldfish'), and it was based on the developers' two earlier online services. At the time of writing, Habbo has local payment systems in more than 30 countries, and 5 million players visit Habbo each month.[28] Instead of an entrance or a monthly fee, the profit model is based on micropayments in the hotel. Virtual furniture, mini-games, and membership in the Habbo club are bought with Habbo currencies. These currencies can either be earned in Habbo or purchased (depending on the country) with pre-paid cards, bank transactions, credit cards, or special text messages that add a specified amount of money to the customer's mobile phone bill.

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[28]Sulake, 2012.

The social interaction in Habbo is diverse. In the design of Habbo, clear winning conditions and gameplay rules have been avoided, and instead, players are encouraged to create their own objectives beyond chatting, room decoration, and meeting friends. The provided environment for these activities is a hotel consisting of public and private rooms, where the virtual hotel visitors, called habbos, chat, buy virtual furniture, decorate rooms, and arrange social and game events. Most of the teenage players log on after school, and according to the developer company, on average they spend around 40–45 minutes per day in the hotel or on its related discussion forums.[29]

The data was gathered both from developers and users through a multi-method approach with varying intensity over eight years (more details in chapter 3). The research started in the fall of 2003 with pilot interviews and participant observation in Habbo user communities. During 2004 I analysed texts written by Habbo users on websites, blogs, and in discussion forums, as well as visitor profiles through a survey that reached 10,000 users. What the Habbo users do in Habbo is reported in articles II and IV, and summarized in section 4.1. The non-professional websites and discussion forums produced by Habbo users, so-called Habbo fansites, have been an important data source for understanding the consumption of Habbo. Since Habbo was launched, active users have kept track of the furniture, events, changes, trends, fashion, and other debates in Habbo. I have followed and logged this user-created documentation of Habbo since the beginning of this research. The fansite analysis is reported in article I and elaborated on in sections 4.1.4, 4.2.2, and 4.4.4.

In 2005 I did 10 theme interviews with Habbo developers and three focus group interviews with altogether 12 Habbo users. In 2006 I participated in the development of customer feedback methods at Sulake. Since 2007 I have regularly tried out new features in Habbo and kept up-to-date through additional interviews with Sulake developers. In addition, Sulake representatives participated in seminars organised by the MC^2 research project in 2003–2006, workshops on virtual economy, and several project meetings. Analyses of the developer processes are reported in articles III and VI, and further elaborated in sections 4.2 and 4.3.

The data analysis proceeded in multiple waves over the years. The survey provided quantitative information of the use of Habbo. The fansites explored different Habbo consumption styles, popular activities, and hotel history (article IV). The topics of the user interviews were their participation histories, changing motivations, and meanings given to membership and reference groups in Habbo (article VII). Taken together, these bodies of data provide us with an excellent view of the varying forms of interchange and dialogue between the varying users and developers of this virtual world, and allows in-depth access into how Habbo users have shaped the service as well as to how the developers' user engagement and research strategies have evolved over the years.

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[29]Sulake, 2012.

2

User Involvement and Social Media

This chapter gives an overview of the most prominent approaches to user involvement: user-centred design, participatory design, and user innovation research. The section on user-centred design includes discussions on usability and user experience. The review focuses on the assumptions about the role of users made in the communication of these design approaches. Even though these three approaches to user involvement are often lumped together, they have markedly distinct assumptions about the role of users. The last section opens up the concept of social media and some of its potential implications to user involvement.

$$\bullet \ \bullet \ \bullet$$

2.1   Approaches to User Involvement

User involvement is commonly presented as a discussion about methods to engage, involve, and learn about users. Many methods and models for user involvement became popular in the 1990s, when a dominant way of framing methods as connected to project lifecycle stages was established. Whereas some argued that user research activities should precede technical design,[1] a number of authors argued for integration with technical design processes.[2] In this latter view, methods were often connected with project lifecycle stages, a framing that was also adopted by the HUSAT Research Institute and the EC UsabilityNet project (Figure 2.1), which evolved into two ISO standards,[3] as well as in work by the usability professionals' association.[4]

Previously Muller and Kuhn (Figure 2.2) created a methods compilation, which ended up in one handbook of human-computer interaction.[5] These method compilations have in common that they structure methods according to a specific time or phase in the development cycle, incidentally the horizontal axis in both figures.

These more and less normative guidelines can also be compared with how designers really think about user involvement methods. Goodman-Deane et al. chose 57 methods for understanding and involving users, described each on a card, and

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[1]Hackos and Redish, 1998.

[2]Cooper, 1999; Mayhew, 1999; Nielsen, 1993; Vredenburg, Isensee and Righi, 2002.

[3]ISO, 2000; ISO, 2002; Maguire, 2001b.

[4]Ross, Nowicki, Solomon, Yarbrough and Schwendeman, 2000.

[5]Muller and Kuhn, 1993.

Planning (Section 3)	Context of use (Section 4)	Requirements (Section 5)	Design (Section 6)	Evaluation (Section 7)
3.1. Usability planning and scoping	4.1. Identify stakeholders	5.1. Stakeholder analysis	6.1. Brainstorming	7.1. Participatory evaluation
3.2. Usability cost–benefit analysis	4.2. Context of use analysis	5.2. User cost–benefit analysis	6.2. Parallel design	7.2. Assisted evaluation
	4.3. Survey of existing users	5.3. User requirements interview	6.3. Design guidelines and standards	7.3. Heuristic or expert evaluation
	4.4. Field study/user observation	5.4. Focus groups	6.4. Storyboarding	7.4. Controlled user testing
	4.5. Diary keeping	5.5. Scenarios of use	6.5. Affinity diagram	7.5. Satisfaction questionnaires
	4.6. Task analysis	5.6. Personas	6.6. Card sorting	7.6. Assessing cognitive workload
		5.7. Existing system/ competitor analysis	6.7. Paper prototyping	7.7. Critical incidents
		5.8. Task/function mapping	6.8. Software prototyping	7.8. Post-experience interviews
		5.9. Allocation of function	6.9. Wizard-of-Oz prototyping	
		5.10. User, usability and organizational requirements	6.10. Organizational prototyping	

Figure 2.1: Methods for Human-Centred Design by Maguire, 2001b.
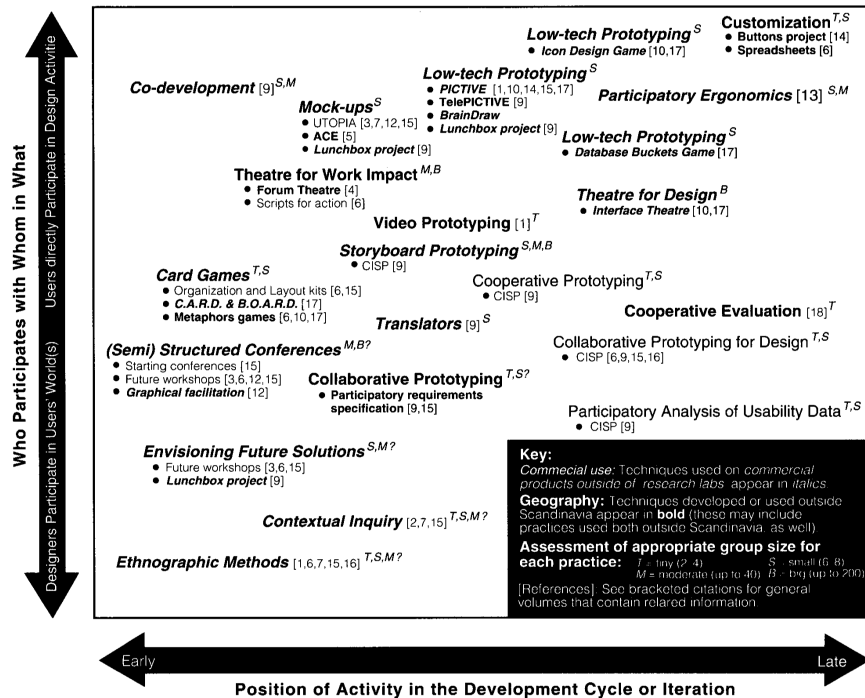
Figure 2.2: Taxonomy of PD Practices by Muller and Kuhn, 1993.

asked 21 designers to sort the methods into groups using any criteria they liked.[6] After a cluster analysis, six clusters of methods were identified (Figure 2.3). Here, the methods became structured according to designers' tasks: examining the market and analysis, understanding users with or without direct contact, and prototyping as well as concept design.

| A: Examining the Market
Market research methods
e.g. Brand audit
    Market segmentation | B: Analysis
Analytical methods for examining ideas, etc
e.g. Anthropometric data
    Task analysis | C: Understanding users without direct user contact |

| C1: Describing users
Creating and using descriptions of users
e.g. Personas
   Maps of relations | C2: Remote user contact
User research from a distance
e.g. Diary methods | C3: User sampling
Groups of users that could be involved
e.g. Boundary users
   Mainstream users | C4: Role play
Referring to one's own experience
e.g. Scenarios
   Try it yourself |

| D: Prototyping
Making models and prototypes
e.g. CAD modelling
   Paper prototyping | E: Concept design | F: Direct user contact |

| E1: Idea generation
Methods for generating ideas
e.g. Image boards
   Brainstorming | E2: Sketching and Introspection
e.g. Sketching
   Personal experience | F1: Interview-based techniques
Talking to users
e.g. Co-design
   Focus groups | F2: Non-interview techniques
Other user contact
e.g. Shadowing
   Usability testing |

Figure 2.3: How developers think about methods by Goodman-Deane, John Clarkson, Langdon and Clarke, 2008.

Whereas the first and third figures are tied to developer activities, the second figure also includes a dimension of participation that ranges from design activities to users' worlds. This participation dimension is related to how independent users are from developers. In the introduction to the book *Appropriating Technology*, Eglash claims that user involvement approaches differ in how they foster dependence or independence (from developers) (Figure 2.4).[7]

Eglash argues that it is not fruitful to romanticise independence, as some times more dependence is needed to facilitate institutionalisation, and other times more independence is needed to free up new possibilities. When is what approach viable? Leonard-Barton argues that it depends on the maturity of the market and how new the technology is to the world (Figure 2.5).[8]

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[6]Goodman-Deane, John Clarkson, Langdon and Clarke, 2008.

[7]Eglash, 2004.

[8]Leonard-Barton, 1995.
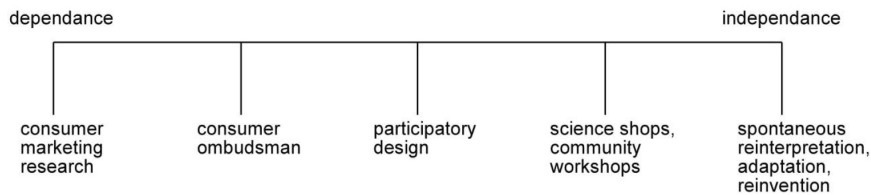
Figure 2.4: The spectrum of dependence-independence for appropriated technologies by Eglash, 2004.
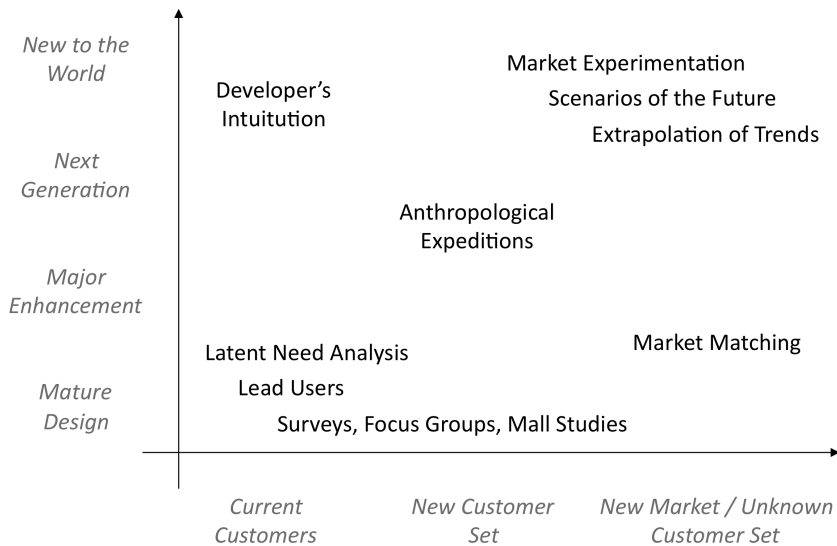
Figure 2.5: Methods for companies to learn from the market by Leonard-Barton, 1995.

With this brief background on user involvement methods, let us examine three of the most prominent long-term schools of thought related to developer-user relations more closely. They feature in many of the methods compilations and have different enough characteristics to illustrate the range of user involvement methods.

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2.2   Influential Turns in User-Centred Design

User-centred design has become a more mainstream topic than before, figuring not only in technical debates, but also in policy and media. However, there is a risk that the concept of user-centred design is becoming diluted as it has travelled far from its origins. User-centred design was coined in the mid–1980s and became part of specific industry practices, before the widespread use of the Internet, computers, and mobile devices. It has been updated and diversified over the years, but

to support a reflection on what user-centredness might mean today in the context of social media, the following sections give an overview of the different turns user-centredness has taken. The following discussion of turns in user-centred design leans on similar discussions in human-computer interaction.[9] This discussion explicates assumptions behind the various turns in the user-developer relationship and the design context.

2.2.1   Design Based on Usability Evaluation

User-centred design emerged as a concept in the mid–1980s.[10] At that time it was closely tied to 'design for usability' and its three key principles, which were: (1) focus on the user early in the design process, (2) measure the quality of the system from a user point of view, and (3) multiple design iterations so that evaluation results have time to influence the end result.[11] Usability evaluations help designers to 'assess our designs and test our systems to ensure that they actually behave as we expect and meet the requirements of the user'.[12] Various usability evaluation methods emerged for different stages in product development to predict or measure how effective, efficient, and satisfied users would be with the system in use. Common methods were laboratory-based user observations, controlled user studies, and inspection techniques.[13]

Even though usability evaluation is still one of the cornerstones of user-centred design, it has received criticism over the years. Early studies that compared the effectiveness of different usability evaluation methods have been criticised,[14] which has resulted in more rigorous method evaluations. In 1998 Jacobsen, Hertzum, and John, and then Molich et al., revealed in a famous series of comparative evaluations that different usability labs provided different results for the same evaluation assignment.[15] Hornbæk found several distinct problems with usability measures in 2006 through a survey of current practice.[16] Greenberg and Buxton noted in 2008 that usability evaluation has gotten such a strong foothold in current practice that 'educational institutes, academic review processes, and institutions with usability groups advocate usability evaluation as a critical part of every design process'. They warned against following the principles blindly, as sometimes thoughtless usability evaluation can be ineffective or even harmful to radical innovations.[17] Barkhuus and Rode criticised current evaluation practice for having low diversity among evaluation subjects and a bias towards male university students.[18]

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[9]Baecker, 2008; Grudin, 2005; Myers, Hollan, Cruz, Bryson, Bulterman, Catarci, Citrin, Glinert, Grudin and Ioannidis, 1996; Rogers, 2004; Rogers, 2009.

[10]Norman and Draper, 1986.

[11]Gould and Lewis, 1985.

[12]Dix, Finlay, Abowd and Deale, 1993.

[13]Dix, Finlay, Abowd and Deale, 1993; Nielsen, 1993; Rubin, 1994.

[14]Gray and Salzman, 1998.

[15]Jacobsen, Hertzum and John, 1998; Molich, Ede, Kaasgaard and Karyukin, 2004; Molich, Thomsen, Karyukina, Schmidt, Ede, Oel and Arcuri, 1999.

[16]Hornbæk, 2006.

[17]Greenberg and Buxton, 2008.

[18]Barkhuus and Rode, 2007.

2.2.2 Turn to the Social and Contextual

In the late 1980s it became apparent that the cognitive foundations of human-computer interaction did not scale up well to multi-user systems. Some researchers and designers adopted broader frameworks such as distributed cognition,[19] activity theory,[20] and ecological psychology.[21] Others rejected the cognitive foundations and 'turned to the social'.[22] Sociologists and anthropologists brought situated action and ethnography to the table.[23] Debates on how these new approaches would help designers and potential implications to design emerged.[24]

Central to many of the initiatives were the questions of ecological validity and a desire to better take into account situational and contextual aspects.[25] A widely used design approach called contextual design emerged in the early 1990s.[26] It became more refined and better packaged[27] and also tuned for agile development.[28] The approach was developed in contrast to usability engineering and artefact examination, and emphasised interview methods conducted in the context of the user's work, co-designing with the user, building an understanding of work in context, and summarising conclusions throughout the research.[29]

Although broadly influential, the social and contextual approaches have received their share of criticism. Rogers found out through a survey of designers that many of the suggested approaches require too much effort or are too difficult to use within the timeframe of normal design projects.[30] Clemmensen, on the other hand, reported that many Danish designers are happy to use social theory in their work.[31] Stolterman argues that many theoretical contributions are too abstract or theoretical, or do not lead to the desired results when used in practice, and that many theoretical moves have failed to make an impact, because of an insufficient understanding of design practice.[32]

2.2.3 From Evaluation to Business Process

One point of the key principles of user-centred design is to show that usability evaluation in the end of the design process is not enough. The evaluation results require iterations of the design process in order to make an impact. The design principles advocate a focus on the users from 'day one' in the project, in order to let user needs drive the design. These ideas were formalised in the late 1990s into

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[19]Hutchins, 1995.

[20]Bødker, 1989; Engestrom and Middleton, 1996; Kuutti, 1996; Nardi, 1996.

[21]Gaver, 1991; Norman, 1988.

[22]Bannon, 1992; Button, 1993; Dittrich, Floyd and Klischewski, 2002; Thomas, 1995.

[23]Blomberg, Giacomi, Mosher, Wall, Schuler and Namioka, 1993; Nardi, 1997; Suchman, 1987.

[24]Barab, Thomas, Dodge, Squire and Newell, 2004; Cooper, Hine, Rachel and Woolgar, 1995; Dourish, 2006; Harper, 2000; Nyce and Löwgren, 1995; Shapiro, 1994.

[25]Kaptelinin, Nardi and Macaulay, 1999.

[26]Wixon, Holtzblatt and Knox, 1990.

[27]Beyer and Holtzblatt, 1998.

[28]Holtzblatt, Wendell and Wood, 2005.

[29]Wixon, Holtzblatt and Knox, 1990.

[30]Rogers, 2004.

[31]Clemmensen, 2005.

[32]Stolterman, 2008.

engineering standards (ISO 13407: Human-centred design processes for interactive systems, and ISO 18529: Human-centred design lifecycle process descriptions)[33] so that companies could evaluate their processes according to objective standards. Philip and Rourke argue that the ISO 13407 was 'instrumental in recognising UCD as being equivalent to other key business processes'.[34]

With the two international standards, user-centred design became a tool for project managers. Instead of focusing on particular methods for evaluation or field studies, such as, for instance, UsabilityNet,[35] the standards put the focus on business processes and organisational capabilities. It was left to the project team to decide which particular evaluation method to use when, and Maguire provided an overview of the options.[36] In addition, a scale was created to measure how mature an organisation was concerning usability. The scale ranges from 'usability unrecognised' to implemented, integrated, and institutionalised.[37] According to Nielsen, it can take as long as 20 years to become a completely user-driven corporation.[38]

Even though there are straightforward guides to institutionalise usability,[39] it is unclear how well the maturity model based usability recommendations fit development practice. Some claim maturity models in general are better suited for medium-sized or large companies, and less suited for small teams with agile development.[40] These voices try to establish maturity models tuned to agile processes, while others claim that maturity models and agile models can coexist and benefit each other.[41] The integration of usability and user experience (see the next subsection) with agile development is debated, with both concerned voices and success stories.[42] Recent research has also criticised these and other models for having adopted too simplified notions of projects, development context, and methods.[43]

2.2.4   A Focus on User Experience

Mobile phones, computers in the home, and digital games reoriented user-centred design. Work was no longer the sole context or location of computer use, which

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[33]ISO, 1999; ISO, 2000, these standards treat 'human-centred' and 'user-centred' as synonyms.

[34]Philip and Rourke, 2006.

[35]UsabilityNet, 2003, suggests the following methods for the requirements phase: surveys, interviews, contextual inquiry, user observation, context of use analysis, focus groups, brainstorming, evaluating existing systems, card sorting, affinity diagramming, scenarios of use, task analysis, and requirements meeting.

[36]Maguire, 2001b.

[37]Bevan, 2001; Earthy, Jones and Bevan, 2001; ISO, 1999; ISO, 2000.

[38]Nielsen, 2006a; Nielsen, 2006b.

[39]Schaffer, 2004.

[40]Agile development is an umbrella concept for lightweight software development methods that emerged as a reaction to heavily regulated and micromanaged software development methods. Agile software development values individuals and interactions over processes and tools; working software over comprehensive documentation; customer collaboration over contract negotiation; and responding to change over following a plan. Beck, Beedle, Bennekum, Cockburn, Cunningham, Fowler, Grenning, Highsmith, Hunt, Jeffries, Kern, Marick, Martin, Mellor, Schwaber, Sutherland and Thomas, 2001.

[41]Glazer, Dalton, Anderson, Konrad and Shrum, 2008.

[42]Hussain, Slany and Holzinger, 2009; Larusdottir, Bjarnadottir and Gulliksen, 2010; Straub, Patel, Bublitz and Broch, 2009; Venturi, Troost and Jokela, 2006.

[43]Svanæs and Gulliksen, 2008; Woolrych, Hornbæk, Frøkjær and Cockton, 2011.

meant that effectiveness and efficiency (two of the three measurement criteria for usability) as well as 'organisational requirements' in the context of use analysis[44] seemed difficult to apply in the new mobile and leisure contexts for design. Approaches based on usability and user-centred design started to appear outdated, and concepts such as interaction design [45][46] and design for user experience [47][48] became more popular. 'Having fun' become a design objective.[49]

Both concepts, interaction design and user experience, are often positioned as something broader than usability and user-centredness. Sharp et al. state that successful designers need skills from 'psychology, human-computer interaction, web design, computer science, information systems, marketing, entertainment, sociology and business'.[50] However, the new methods associated with user experience, such as persona descriptions,[51] goal-directed design,[52] and the methods list in Kuniavsky's practical book,[53] are also communicated as user-centred design methods, or appear fairly similar to previously presented design methods, which makes some authors treat user experience as one part of a broad user-centred design umbrella.[54]

User experience methods have been criticised for focusing solely on user studies, user feedback, and user testing, thereby forgetting design and performance.[55] Constantine and Lockwood advocate usage-centered design instead, which would take model-driven exploration, comprehensive task modelling, and model-driven abstract prototyping seriously.[56] Battarbee criticised user experience methods for focusing too much on the individual's experience, thereby forgetting how user experience is constructed in social interaction.[57]

2.2.5   Centering Design on Value(s) and Activity

The ideas related to being user-centred are sometimes taken out of context, which has led some to interpret user-centredness as 'users know best'. A contributing factor to this opinion is that the innovative encounters between business, techno-

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[44]Maguire, 2001a.

[45]One definition of interaction design is 'designing interactive products to support the way people communicate and interact in their everyday and working lives'. See Sharp, Rogers and Preece, 2007.

[46]Cooper, 2003; Preece, Rogers and Sharp, 2002.

[47]One definition of user experience is 'a person's perceptions and responses that result from the use or anticipated use of a product, system or service'. ISO, 2010. Law et al. provide up-to-date scoping of the concept and note that it is dynamic, context-dependent, and subjective. See Law, Roto, Hassenzahl, Vermeeren and Kort, 2009.

[48]Buxton, 2007; Forlizzi and Battarbee, 2004; Hassenzahl and Tractinsky, 2006; Kuniavsky, 2003.

[49]Blythe, 2003; Jordan, 2000.

[50]Sharp, Rogers and Preece, 2007.

[51]Cooper, 1999; Pruitt and Adlin, 2006.

[52]Cooper, 2003.

[53]User experience methods explained by Kuniavsky: interviewing, profiling, contextual inquiry, task analysis, card sorting, focus groups, usability tests, surveys, diaries, advisory boards, beta testing, telescoping, log files, customer support, competitive research, published information, and consultants. See Kuniavsky, 2003.

[54]Keinonen, 2010.

[55]Constantine, 2004.

[56]Constantine and Lockwood, 1999.

[57]Battarbee, 2003.

logy, and user knowledge have been written 'between the lines'. Many of the books and thoughts about user-centredness were written for developers in business contexts. Being a developer in a technology company implies a strong understanding of the possibilities and limits of the company's technological platforms and business model. For these reasons, developer subjectivity along with technological and business values were taken for granted, perhaps under-emphasised, and the combination of knowledge about users with technological and business dependencies were left as an exercise for the reader.

Two recent approaches, activity-centred and value-centred design, criticise these and other points in user-centred design. Gilmore et al. raise the question of values, value, and worth in relation to both design and human-computer interaction.[58] Friedman coined the notion of value-sensitive design to push self-reflection among designers on what values become embodied in any design result, whether intentionally or unintentionally.[59] Bias and Mayhew have long discussed business values and return on investment in relation to usability.[60] Cockton attempts to integrate discussions on these different values for end-users and businesses through his approach of worth-centred design.[61]

Norman re-examined the common user-centred dogma of 'know your user' and argued that too much design focus upon individual people might improve things for them, but at the cost of making it worse for others.[62] Instead of focusing on individual taste and preferences, he argued for a focus on the activity in which people participate. Constantine also argues for an activity-centred design approach, but talks about designing for use,[63] or usage-centredness,[64] which could be based on activity theory.[65] However, a discussion on the Interaction Design Association's blog shows that seasoned user-centred designers find nothing new in suggestions promoting activity-centricism, but the change in language might make the design approach easier to grasp for people from other fields.[66]

These debates show that the positioning of user-centredness, as opposed to system-centricity or developer-centredness, is no longer obvious, if it has ever been so. For communication purposes it has perhaps been a mishap that a focus on users, tasks, and environment (which is what the previously mentioned ISO standards, the early texts about user-centredness, and the context of use models are all about) is called 'user-centred'. For instance, one seminal book on user-centred design devotes a whole part in the book to user activities.[67] The discussions on values, values, and worth reflect an aspiration to frame user-centredness more explicitly as part of a larger picture, namely business and society.

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[58] Gilmore, Cockton, Churchill, Kujala, Henderson and Hammontree, 2008.

[59] Friedman, 1996; Friedman, 1997.

[60] Bias and Mayhew, 1994.

[61] Cockton, 2006.

[62] Norman, 2005.

[63] Constantine, 2006b.

[64] Constantine and Lockwood, 1999.

[65] Constantine, 2006a.

[66] IXDA, 2008.

[67] Norman and Draper, 1986.

2.3 A Parallel Debate: Participatory Design

2.3.1 Activist Origins

While user-centred design is often presented as a win-win situation,[68] the roots of participatory design are based on the perspective of value conflict. The approach emerged in Scandinavia and Germany in the 1970s as part of a cooperation between academics and people from trade unions. As new technology was entering offices and shop floors, management saw this as an opportunity for increased profitability, while workers and trade unions wanted to highlight values such as quality of work and products, democracy at work, and local development. The participatory initiatives included means for resolving these value conflicts, contracts, and organising issues (e.g., engaging workers in the design through local clubs), and an ambition to design the future job first and technology second. Commonly used techniques of today, such as future workshops, prototyping, use models, mock-ups, and organisation simulation tool kits, were pioneered in the 1970s and 1980s.[69]

Whereas participatory design can make a difference where traditional systems development fail, it too has received its share of criticism. Some claim the early approaches are too coupled with Scandinavian culture, and some argue they are too timeconsuming or focus too much on consensus seeking. Others argue that the initiatives lack scalability and focus too much early stages of projects, forgetting the actual design. Also, framing the design process as conflict and positioning in favour of workers can be detrimental to design contexts, where conflict resolution mechanisms are not as well in place as the 'democratisation of work' design contexts of Scandinavia in the 1970s.

2.3.2 What Counts as Participatory?

Kensing and Blomberg find three main issues that have dominated participatory design literature: '(1) the politics of design, (2) the nature of participation, and (3) methods, tools and techniques for carrying out design projects'.[70] The discussions around politics of design have varied significantly over the years, as the conditions for industrial democracy changed and the union power decreased. Some researchers are concerned that participatory design focuses solely on methods, tools, and techniques for individual projects, with too few projects engaged at the company level[71] and the national legal and political level.[72] This has blurred the boundaries between user-centred and participatory design, and Gulliksen et al. found overlapping themes:[73]

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[68]If users share their motivations and aspirations with developers, who come to understand user needs better, users get a better product and developers get the design right the first time, which reduces risk and increases profit.

[69]Bjerknes, Ehn, Kyng and Nygaard, 1987; Floyd, Mehl, Resin, Schmidt and Wolf, 1989; Greenbaum and Kyng, 1991; Schuler and Namioka, 1993.

[70]Kensing and Blomberg, 1998.

[71]Gärtner, 1998.

[72]Bjerknes and Bratteteig, 1995.

[73]Gulliksen, Lantz and Boivie, 1999.

- when and how to involve the user in a design and development process;
- practical experience of prototyping and video recording in the analysis, design, and evaluation process;
- organisational obstacles to user-centred design;
- the role of the facilitator in the development process; and
- communication problems that occur when people with varied skills and expertise communicate with each other.

It appears that user-centredness does not necessarily imply a great deal of user participation.[74] Participatory design, however, has fairly strict criteria of participation:[75]

1. access to relevant information;
2. the possibility of taking an independent position on the problems;
3. participation in decision making;
4. the availability of appropriate participatory development methods; and
5. room for alternative technical and/or organisational arrangements.

Even though participatory design is not an integrated framework for design, some analyses of participation have become more widespread than others. Bossen et al. highlight the following aspects of participation: kinds of people (with respect to role in development, e.g., end-user, manager, vendor, or other stakeholder), type (direct-indirect), degree (sources of information vs. codesigner), duration (procurement, initial design phase, throughout project), and arena of participation (project, organisation, national).[76]

Today participatory design is being developed in multiple directions. On the one hand, there is a renewed interest in developing yet more methods for hands-on engagement of users and business actors, intended for the concept design phase. On the other hand, several research groups are moving towards research designs with extended timeframes and a continuation of design activities across multiple development cycles.[77] This includes, compared to established frameworks such as MUST, more complex collaboration between research organisations and private companies in customised public-private-partnerships.[78] [79]

2.3.3 New Territories for Participation

Hagen and Robertson discuss challenges and opportunities for participation in the context of social technologies, which they define as 'tools and practices that constitute our increased capacity for personal communication, production, publication, distribution and sharing'. Example social technologies are Facebook, Ning, Flickr, YouTube, and Wordpress. They raise the following important topics: complex

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[74]Gulliksen, Lantz and Boivie, 1999.

[75]Clement and Besselaar, 1993.

[76]Bossen, Dindler and Iversen, 2010; Gärtner and Wagner, 1996.

[77]Voss, Hartswood, Procter, Rouncefield, Slack and Büscher, 2009.

[78]Bødker, Kensing and Simonsen, 2004.

[79]Interview with Finn Kensing 1 Nov 2011.

and variable contexts of use, emergent design, designer role, and the intertwined nature of design and use.[80]

Complex and variable contexts of use. In contrast with previous participatory design settings from the 1980s and 1990s, the number of both people involved and use situations has increased drastically. This challenges approaches that try to simulate or model future use in advance during the planning process. Isbister and Höök aptly state that there are too many new variables of use.[81] Heterogeneity of actors has been a long-standing research theme in, for instance, technology studies, but has received new attention, as these social technologies are more large-scale than previous groupware systems. The anonymity and geographic distribution of users also present new challenges.[82]

Design is emergent. In contrast with traditional models of software engineering, where development ends with a maintenance phase, participatory design has emphasised that design is completed in use.[83] This emergent design in and through use is very visible in service development for social media and related concepts such as perpetual beta. In the hands of users, services such as Facebook, Twitter, and Flickr have transformed from what developers originally intended them for. This emergent property of design has previously been discussed in participatory design under the themes of appropriation, customisation, personalisation, and tailoring.[84]

Designer role. One of participatory design's key topics is that new technology and work practices need to be planned in tandem. In the context of social technologies, this translates into planning not only the technical platform, but also the participation of the future community of users. Researchers have noted that communities can take up concerns that have been under-addressed by designers.[85]

Design and use. Social technologies highlight the intertwined nature of design and use. The short development cycles and long duration of evolving projects enable use to feed into design in unforeseen ways. We can no longer study design and use as separate concerns.[86]

These challenges and opportunities are revisited in section 2.5 on social media, and the methodological consequences for this thesis are outlined in chapter 3.

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2.4   User Innovation Research

User innovation research is one of the dominant literatures on user involvement. In contrast with the human factors and ergonomics origins of user-centred design and the political origins of participatory design, research on user innovations has

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[80]Hagen and Robertson, 2010.

[81]Isbister and Höök, 2009.

[82]Clement, Costantino, Kurtz and Tissenbaum, 2008; Ehn, 2008.

[83]Henderson and Kyng, 1991; Voss, Hartswood, Procter, Rouncefield, Slack and Büscher, 2009.

[84]Balka and Wagner, 2006; Mørch and Mehandjiev, 1999; Nardi, 1993.

[85]Botero and Saad-Sulonen, 2008; DiSalvo, Maki and Martin, 2007; Merkel, Xiao, Farooq, Ganoe, Lee, Carroll and Rosson, 2004.

[86]Williams, Stewart and Slack, 2005.

a background in economics. The main question that this research strand asks is where innovations come from, with special focus on the role of users. Contrary to the dominant belief in economics, research has revealed that a significant part of advances in technology stem from developments and modifications by users,[87] not professional researchers or designers.[88]

The impact of these research findings has been boosted by the visibility of open-source development projects (such as Linux) and peer content creation in Web 2.0 applications (such as Wikipedia). Suddenly user innovation has been widely seen to 'democratize' innovation activities, which were previously restricted for technical, scientific, and economic elites.[89] Broadening the base of innovation has been argued to increase economic prosperity, bring empowerment and enjoyment to citizens, and cut dependency on the offers of large incumbent companies.[90] User innovations are also considered key in regard to a variety of products available to consumers (e.g., web cameras, web mail) and in offering cheaper and free alternative products (e.g., Mozilla Firefox in web browsing, many surgical instruments). For companies, tapping into user innovation is argued to present opportunities to cut research and development costs and a source of adjoining products and platforms.

2.4.1   The Lead-User Methodology

User innovation research often talks about a particular kind of user, lead-users, who have two defining characteristics: (1) they are at the 'leading edge of the market with respect to an important market trend' and (2) expect to gain 'relatively high benefits from obtaining a solution to their needs'.[91] A lead-user methodology has been developed for companies to complement traditional market research techniques for innovation. The basic idea is that an organisation can invite such lead-users to help and jointly develop products. It is recognised that significant knowledge can be learned from lead-users in analogue markets, markets facing similar problems. The methodology covers different ways of identifying leading market trends, relevant lead-users, and ways of engaging lead-users—for instance, through concept design workshops.

The lead-user methodology has mostly focused on identifying and engaging lead-users in developing new products, but a part of the user innovation research has focused on communities around established products—for instance, sports and gaming communities.[92] This research strand has also examined how users contribute to company innovation through innovation platforms and so-called user innovation toolkits.[93]

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[87]von Hippel defines users as 'firms or individual consumers that expect to benefit from *using* a product or a service', in contrast with manufacturers that expect to benefit from *selling* a product or a service.

[88]Hippel, 1988; Hippel, 2005; Hippel, Thomke and Sonnack, 1999; Lüthje, Herstatt and Hippel, 2005.

[89]Benkler, 2006; Hippel, 2005.

[90]Benkler, 2006.

[91]Franke, Hippel and Schreier, 2006; Hippel, 1988.

[92]Baldwin, Hienerth and Hippel, 2006; Hienerth, 2006; Lüthje, 2003.

[93]Hippel, 2005; Hippel, 2001; Jeppesen and Frederiksen, 2006; Jeppesen and Molin, 2003.

Compared to participatory design, the lead-user approach does not take a stance in favour of democracy or emancipation; rather, it is oriented towards commercial goals. In line with participatory design, the lead-user approach also suggests toolkits for user innovation and custom design. Instead of trying to completely understand all user needs, von Hippel and Katz suggest a strategy of modularisation and flexibility so that users can put the parts together themselves.[94] The phrase 'democratising innovation', which is the title of von Hippel's well-known book and therefore associated with this approach, has been criticised for applying a very narrow perspective on democracy, due to the focus on lead-users and user inventors only and no participation criteria.[95]

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2.5   Social Media: A Distinct Design Context

Social media has entered many debates on technology and society. Here, besides briefly giving some examples of how social media is changing business and society, I will approach social media as a particular design context, which is distinct from others based on three socio-technical criteria: type of software business, functionality, and users and use.

The emergence of social media has changed the interaction between computers and society again. Previously computerisation movements[96] changed warfare, industries, government administration, health care, banking—just about all sectors of society—through active entrepreneurs and innovators harnessing evolving computer-based technologies to be adopted and adapted by both public and private organisations. First, specialised and mainframe computers, then mini and micro computers, computer networks, and related software were taken into use by organisations for different reasons (productivity, democratisation, collaboration).[97] This time it is a combination of useful and usable computer-based technologies for *consumers*,[98] services for groups of people,[99] business model innovations,[100] and active content-sharing users[101] that is changing society.

Social media has changed the media industry, as new collaborative forms of producing media content and distribution channels have emerged. Gillmor details how webpages, blogs, feeds, and photos from mobile phones change media coverage of disasters.[102] Benkler notes that new services tend to keep the group in mind,[103] as opposed to earlier computerisation movements. Jenkins draws a

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[94]Hippel and Katz, 2002.

[95]Björgvinsson, Ehn and Hillgren, 2010; Hyysalo, 2010.

[96]Computerisation movement is a concept by Kling and Iacono that avoids both technological and social determinism, as it considers three components that interact with and shape each other: technological frames, public discourse, and organisational practice and use. See Elliott and Kraemer, 2008.

[97]Elliott and Kraemer, 2008; Rosenberg, 1997.

[98]Bruns, 2008; Jenkins, 2006.

[99]Benkler, 2006.

[100]Osterwalder and Pigneur, 2010.

[101]Gillmor, 2004; Shirky, 2008.

[102]Gillmor, 2004.

[103]Benkler, 2006.

picture of the new media landscape, where media convergence, participatory culture, and collective intelligence shift the boundaries between media producers and consumers.[104] Bruns argues that users are able to move smoothly across a participation continuum, stretching from active content creation through various levels of engagement with existing content, and on to mere use of content.[105] User-created content became a popular concept in 2005 because of these changes, and has been defined by OECD[106] as content fulfilling three criteria: (1) content made publicly available over the Internet, (2) which reflects a certain amount of creative effort, and (3) which is created outside of professional routines and practices.[107]

A societal change is not only about changes in one industry, but about changes in people's everyday lives. Shirky gives numerous examples of how individuals with tools for sharing and cooperation join together and get things done without formal organisations.[108] Online social networks, such as Friendster, MySpace, and Facebook have transformed the patterns of meeting new people and hanging out with friends online.[109] Camera-equipped mobile phones and photo-sharing sites have changed the picture of domestic photography.[110] Tapscott and Williams argue that the way Internet changed specific business is spreading towards other sectors, along with the principles of collaboration, openness, sharing, integrity, and interdependence.[111] No longer is this only a question of mass collaboration in the by-now-famous Linux, Wikipedia, Google, Youtube, InnoCentive, Flickr, Second Life, MySpace, and the Human Genome Project, but rather a phenomenon across many sectors (Table 2.1).

Despite much debate about social media, a common agreed-upon definition has yet to emerge. Kaplan and Haenlein have put forward a suggestion, but one that relies on Web 2.0, which is unfortunately not well defined in the article, nor in general. They consider Web 2.0 as a term that was first used in 2004 referring to a platform based on blogs, wikis, collaborative projects, Adobe Flash, RSS, and AJAX. However, Scholz argues convincingly that definitions of Web 2.0 are vague at best, that Web 2.0 does not form a coherent technological platform, and that the claimed novelty of the associated technologies is false. For instance, the first blogs and wikis emerged in 1994–1995, CSS and RSS in 1998–1999, and social networking sites like Classmates.com in 1995 and SixDegrees.com in 1997. Despite an influential article by Tim O'Reilly's, an annual conference, and 114,000,000 Google hits, Web 2.0 as a clear set of technologies remains too elusive and fuzzy as a ground for this research.[112]

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[104] Jenkins, 2006.

[105] Bruns, 2008.

[106] OECD, 2007.

[107] This definition is illustrative of the ideas behind the user-created content phenomenon. However, the definition appears a bit shaky when studied in more detail. Take, for instance, (1) Facebook: it could not function without user-created content, but it is not publicly available; (2) Google searches: one form of user-created content that hardly can count as creative effort; and (3) bloggers who make money: a visible portion of bloggers are professional, but in the new profession of blogging.

[108] Shirky, 2008.

[109] Piskorski, Eisenmann, Chen and Feinstein, 2011.

[110] Sarvas and Frohlich, 2011.

[111] Tapscott and Williams, 2010.

[112] Federated Media Publishing, O'Reilly Media Inc. And UBM Techweb, 2011; Kaplan and Haenlein, 2010; O'Reilly, 2005; Scholz, 2008.

Table 2.1: Some advanced online service examples from MacroWikinomics by Tapscott and Williams, 2010.

Domain	MacroWikinomics Service Examples
financial services	VenCorps.com, Prosper.com, Zopa.com, Qifang.cn
innovation	Local-Motors.com, Ponoko.com, inno-360.com, XPrize.org
climate change	Earth.Google.com, EyeOnEarth.eu, Carbonrally.com, EarthLab.com, WorldWithoutOil.org, Carma.org, GoodGuide.com, GreenXchange.cc
green energy	'open source grid', theRavinaProject.org, 1bog.org
transportation	ZipCar.com, BetterPlace.com, GoLoco.org, ZimRide.com, PickupPal.com, Carticipate.com
university education	AcademicEarth.org, OCWConsortium.org, RateMyProfessors.com
science	GalaxyZoo.org, EarthSystemGrid.org, PLoS.org, NeptuneCanada.ca/o2, OpenWetWare.org
health care	PatientsLikeMe.com, WeAre.Us, FluWikie.com, MDJunction.com, OrganizedWisdom.com
newspaper	HuffingtonPost.com, Craigslist.org, Monster.com, eBay.com
music	Last.fm, We7.com, Rhapsody.com, Spotify.com, Pandora.com, OurStage.com, RiffWorld.com, hitRECord.org, Nettwerk.com
tv and film	Netflix.com, IndieGoGo.com, Hulu.com
public value	FixMyStreet.com, mySociety.org, PeerToPatent.org, Scorecard.org, Data.gov, GovLoop.com
citizen regulator	Witness.org, CorpWatch.org, Crocodyl.org
global problems	Kiva.org, Sparked.com, NetSquared.org, ReliefWeb.int
fighting for justice	IndyMedia.org, Twitter.com, Facebook.com, WikiLeaks.org, 'Blogosphere'

Allen provides an insightful example of how Web 2.0 can be conceptualised, which I can lean on with respect to social media. He departs from the assumption that Web 2.0 is about technologies alone and states that it is about 'ideas, behaviours, technologies and ideals all at the same time'. He considers Web 2.0 as a conceptual frame with four main elements: technology, economy, users, and philosophy. Technology-wise, he discusses functionality such as data mash-ups and automated collation of data about a user, which 'enable other users to contact and interact with that first user'. With respect to economy, Allen describes a multi-sided business model, where the service is free for users, who become an audience for advertisers, who pay the service operator for displaying advertisements targeted to specific users. Concerning users, Allen discusses a 'media consumer who is more engaged, active and a participant ... in the creating, maintaining, and expanding the "content"'. Philosophically, Allen states that Web 2.0 is a political statement of a kind of libertarian capitalism, positioning users as 'relatively equal and equally engaged participants'. None of these four elements is entirely new,

but their combination was once relevant (during the dot.com bubble), and the versioning number (2.0) signifies that renewed relevance.[113]

In analogy with Allen, I outline a few elements—not limited to technologies—for understanding social media as a design context. The point here is to be specific with respect to user–designer relations and contrast social media with other previous design contexts, such as groupware or personal computing, from which some of the principles of user involvement originate. For the purposes of this thesis I outline a set of socio–technical criteria for a social media design context, which constitutes a sensible frame of generalisation for this research (see also section 3.3). These socio–technical criteria for a social media design context are set with respect to type of software business, functionality, and users and use:

- Type of software business: Relatively low cost of construction, modification, and distribution, which typically results in considerable development after market launch, as well as unconventional revenue models (see subsection 2.5.1).

- Functionality for group communication: Features that support open-ended messages and other user-created content, a collection of groups, and awareness about other users (see subsection 2.5.2).

- Users and use: Active user communities (dialogue among users, peer interaction) and peer production, as well as a high degree of voluntary use (that is, not a workplace technology that users are obliged to use) (see subsection 2.5.3).

Intentionally excluded criteria are at least openness (of data, sourcecode, or hardware), and software development pace and iterations (the software can develop at whatever pace, the important thing is the typically low initial costs of construction).

2.5.1 Social Media and Industry Lifecycles

Online services 10 years ago were different from social media today, as dominant players and designs have been established. Theories of innovation suggest that niche innovations emerge and challenge the regimes in cycles.[114] Tushman and Anderson describe how technological breakthroughs 'initiate an era of intense technical variation and selection, culminating in a single dominant design'.[115] While they consider this innovation process to be random, other authors disagree with this evolutionary proposition, stating that the innovation process is neither random nor planned, but something in between.[116]

Niches can be pushed back by the dominant regime, and only occasionally new types of techno-economic innovations redefine the industry structures in a given sector. When this occurs there is typically an early exploratory phase when both

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[113]Allen, 2008.

[114]Geels and Schot, 2007; Klepper, 1997; Perez, 2010; Tushman and Anderson, 1986; Van de Ven, Polley, Garud and Venkataraman, 1999.

[115]Tushman and Anderson, 1986.

[116]Geels and Schot, 2007; Perez, 2010; Van de Ven, Polley, Garud and Venkataraman, 1999.

technological solutions and business models change rapidly and feature high variation. The uncertainty and variation gradually diminishes, giving way to a few dominant classes of producers and business models.[117]

My case is situated in a particular timescale of innovation; I have followed it from niche to mainstream. This location in the innovation lifecycle is important to note regarding generalisations, as there are different needs for user involvement and user research in the early phases of innovation versus later on, when the market is more mature.[118] For instance, in a mature market benchmark products and services are easier to find compared to a new market.

As described above, social media challenges many different sectors of society. As a consequence, different dominant designs are challenged, depending on which sector one takes as a starting point. For newspapers, the discussion would include technological frames and organisational practices around technologies such as the printing press, offset printing, typesetting, desktop publishing, digital devices, and digital distribution for instance. For software business, the dominant designs or business models stem from the developments of mainframes, mini, micro, and networked computers with related modes of software distribution (e.g., tape, floppy disks, CDs, DVDs, over the Internet). Here, the focus is on software business.

Social media shakes established software business models. In the mid–1990s software business was fairly stable around three dominant business models: software contracting, corporate software products, and mass-market software products. Software contractors relied on specialisation, accurate cost estimation, and project management to survive in bidding processes on million-dollar software. Corporate software products became classic capital goods, with high initial development costs and big sales volume, but because of a high degree of mission criticalness and consequential long-term customer relationships, a business model based on quality assurance, pre- and after-sale support emerged. Mass-market software companies relied on ease of use, mass marketing, and big sales volumes.[119]

On this broad level, one can say that social media software business is a new mix of the above—with varying degrees of specialisation (niche services), big sales volume, after sale support, and ease of use—with the addition of user-created content. In addition, four other trends in software business influence social media service design. First, the instant and low-cost distribution of incremental feature changes to users, commonly associated with software-as-a-service.[120] Second, more mature software frameworks that allow for low cost of construction and modification of design. Third, a reliance on advertising within the service itself— as some social media services have gathered large numbers of users, targeted ads have become viable business.[121] Fourth, unlike software licenses (and optional support fees) that users pay for, some services sell content or virtual items with virtual currencies.[122]

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[117]Geels and Schot, 2007; Van de Ven, Polley, Garud and Venkataraman, 1999.

[118]Leonard-Barton, 1995.

[119]Campbell-Kelly, 2003.

[120]Campbell-Kelly, 2009; Campbell-Kelly and Garcia-Swartz, 2008.

[121]Akera, 2008; Osterwalder and Pigneur, 2010.

[122]Haigh, 2008; Lehdonvirta, 2009.

2.5.2 Functionality for Group Communication

Even though there are no established functionality sets that social media services must conform to, a high-level sketch of common functionality from a user perspective can be outlined. Many social media services are based on a simple idea: users sending messages to other users in an information space. More specifically, here I scope the interest of this thesis to services that support (1) open-ended messages and other user-created content, (2) collections of groups, and (3) a high degree of awareness about other users and groups. The latter two dimensions are important for users' understandings of other users and community dynamics that shape the developer-user relationship.

These characteristics of group communication functionality enable us to explicate how some social media services are similar and different compared to groupware. Groupware,[123] also referred to as collaborative software or collaboration technology, became established in the 1980s.[124] Despite apparent similarities (to be outlined below), the relationships between social media and groupware have yet to be systematically explored. Traditional taxonomies of collaboration technologies—such as systems for communication, information sharing, cooperation, coordination, and social encounter[125]—do not seem to fit social media services, as this new breed of services combine functionality from different types of collaboration technologies. Ongoing research in this direction has also been communicated through concepts such as collaborative virtual environments,[126] social software,[127] social computing,[128] and social technologies,[129] but these discussions do not address the aspects of functionality explored here.

Open-ended messages and other user-created content refers to one of the two typical approaches to groupware. Some groupware systems were based on strict workflows, while others were based on a context or open space that allowed groups to self-organise. The workflow approach implied applying automation to group processes—for instance, letting the computer system handle 'paper-pushing' between people. This approach was based on detailed descriptions of work processes and predefined messages, while the open space approach let the users bring their work processes little by little to the system, which meant that it was more open to changes to the forms of communication and work processes, thus allowing for open-ended user-created content. Key functionality were open-ended mes-

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[123]Johnson-Lenz and Johnson-Lenz, 1991, 'intentional group processes plus software to support them'.

[124]Andriessen, 2003; Baecker, 1993; Coleman, 1997; Johansen, 1988.

[125]Andriessen, 2003, p. 10.

[126]Benford, Bowers, Fahlén, Greenhalgh and Snowdon, 1995; Brown and Bell, 2004, 'multi-user virtual reality systems which explicitly support co-operative work'.

[127]Allen, 2004; Shirky, 2003, 'software that supports group interaction'.

[128]Erickson, 2011, 'social computing refers to systems that support the gathering, processing and dissemination of information that is distributed across social collectives'.

[129]Hagen and Robertson, 2010, 'Tools and practices that constitute our increased capacity for personal communication, production, publication, distribution and sharing'.

sages[130] and flexibility in organising group space.[131]

While groupware systems, such as discussion lists and shared media spaces or workspaces, typically supported interaction between members of one group, current social media services are built for *collections of groups*. Even though some groupware systems, such as Usenet newsgroups or Lotus Notes, were built for many groups, the inter-group communication was typically based only on setting up a space that was shared among groups. In contrast, some social networking services excel in providing awareness mechanisms, like feeds, syndication services, and other aggregations (e.g., toplists, popular content) of what takes place in all the groups together.

This discussion on *awareness* draws on Gutwin and Greenberg's concept of workspace awareness for real-time groupware.[132] They outline a set of 10 awareness elements that answer basic questions about who, what, and where in groupware systems (Table 2.2 below). These elements are central for supporting group processes in groupware. The questions are tuned for real-time collaboration in one workspace, but the elements could as well be applied to more asynchronous settings and inter-group communication between group spaces.

Table 2.2: Workspace Awareness for Real-Time Groupware by Gutwin and Greenberg, 2002.

Category	Element	Specific question
Who	Presence	Is anyone in the workspace?
	Identity	Who is participating? Who is that?
	Authorship	Who is doing that?
What	Action	What are they doing?
	Intention	What goal is this action part of?
	Artifact	What objects are they working on?
Where	Location	Where are they working?
	Gaze	Where are they looking?
	View	Where can they see?
	Reach	Where can they reach?

Another key functionality for systems that support large collections of groups is decentralised group space creation. This pattern, where users can create spaces for themselves and their peers, as well as control the access to those spaces, emerged from multi-user dungeons (MUD), virtual worlds, large community platforms (e.g.,

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[130]It is the details and combination of various synchronous and asynchronous message forms that makes a service unique. Herring, 2007, lists 10 medium factors that can be used for analysis of the medium that conveys such messages. . For instance, a Twitter message (a tweet) is asynchronous, transmitted 1-way, persistent, has a message buffer of 140 characters, text-only, anonymous, not private, filterable, and quotable. This medium factor list is open-ended, intended for computer-mediated discourse analysis, and presented along with a list of eight situation factors, related to participants and their activities. Even buttons, such as the Facebook Like button, can be interpreted as such a message. It is asynchronous, transmitted 1-way, persistent, closed content (this user likes that) instead of a message buffer, a button that results in a text, not anonymous, nor private, ignorable, not quotable. However, here the intention is not to dig into small differences between similar services, but to point out broader similarities among services.

[131]Andriessen, 2003; Baecker, 1993; Coleman, 1997; Johansen, 1988.

[132]Gutwin and Greenberg, 2002.

Yahoo Groups, Google Groups), and social networking sites. It is created out of necessity, as the services would not grow flexibly enough, if the developers had to moderate group space creation. When there are many interconnected spaces, mechanisms to move between them and find out what is going on in other places emerge. The nuances in getting these details right are key to virtual worlds building,[133] but for the purpose of this outline it is enough to point out that the information space in social media services is made up of group-sized spaces, with paths, hubs, and meeting points between them.

Table 2.3 below sums up the functionality that supports (1) open-ended user-created content, (2) collections of groups, and (3) a high degree of awareness about other users and groups. This list of functionality is shared among many social media platforms for a large audience, such as Facebook, MySpace, and Second Life. This is not to say that this case study does not generalise to other cases without this functionality; it still might do so on the basis of the two other angles presented in sections 2.5.1 and 2.5.3. Table 2.4 lists basic functionality that would have made Table 2.3 too complex: basics about asynchronous collaboration, interconnected spaces (the consequence of supporting collections of groups), and advanced features that relate to moderation and advertising.

Table 2.3: Shared group communication functionalities of many social media platforms.

Open-ended messages and other user-created content	
Open-ended messages	A variety of synchronous and asynchronous message forms between users.
Flexibility in organising group space	Choosing from predefined space elements (e.g., various content boxes, space plans) or creating new ones.
World building (optional)	In some services users can participate in more fundamental world building, in others not.
Collections of groups	
Interconnected spaces	To support a collection a groups, each group needs its own space (see Table 2.4).
Decentralised group space creation	Users can create actual shared spaces (e.g., groups, rooms, forums, shared blogs) based on configurable plans (e.g., templates) by designers.
Users control access to their spaces	Designers control access to the whole service, but access control is shared with users to the places created and shared by users.
High Degree of Workspace Awareness	
Awareness elements	Interface elements and mechanisms that support questions like who is here, where are my friends, and what are they doing? (see Table 2.2)

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[133]Bartle, 2004.

Table 2.4: Basic functionalities of many social media platforms, added detail for Table 2.3.

Asynchronous collaboration basics	
Persistent information space	No rebooting, no game over, no reset.
Unique and persistent user identities	Usernames, photo/avatar, profile pages persist between logins.
Micro-movement	In the current location/place ('walking', scrolling, clicking).
Interconnected spaces	
User locations	Users are somewhere, not everywhere, in the social media service.
Paths and transportation between spaces	Links, doors, and buttons that take the user from one space to another.
Hubs and meeting points with feeds	Places or lists with multiple destinations, e.g., lists of groups, friends, popular locations, popular content.
Advanced features	
Moderation systems	Functionality to report and remove content.
Advertising and other in-world media	Ads and other 'media within media' often require their own publication and moderation system.
Virtual currencies	Some social media services supply service-specific currencies that can be used to purchase goods and services within the service
Fundamental world building	Configurations of user profiles/avatars, virtual assets, group spaces, API:s for apps.

Such a functionality-based angle to social media would focus the attention on a blogging platform, not an individual blog, or on a CMS platform, not a particular website based on that CMS platform, and so on. This functionality table also moves this social media discussion further away from the particularities of Web 2.0 that relate to content aggregation and mashups. It escapes artificial boundaries between social networking services and virtual worlds. Instead it is sensitive to the features that makes scalability possible (decentralised group space creation), links, and those features that make users' control over content possible.

The main two dimensions of this functionality view can be made into a two-by-two figure, where the social media services most relevant to this thesis can be found in the upper-right quadrant. The shared workspace and virtual worlds are considered to have to most advanced support for realtime workspace awareness, whereas, for instance, Facebook is not as far on that dimension for two reasons. First, real-time workspace awareness is more advanced in most groupware systems, and second, Facebook provides very personalised views to the service, which re-

duces the shared views to the service space, which is one key aspect of workspace awareness.
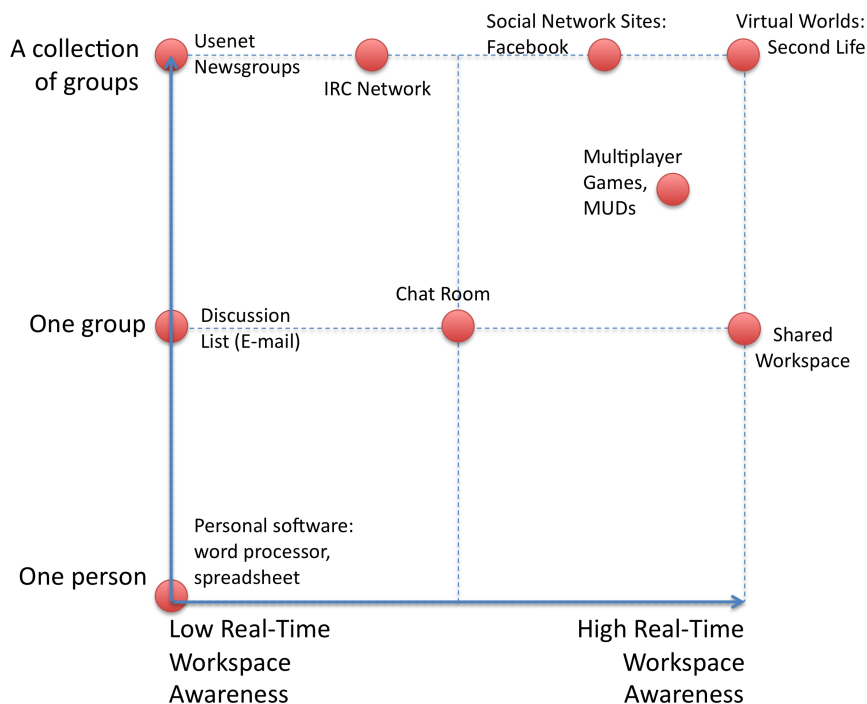
Figure 2.6: Dimensions of relevant social media functionality: awareness and support for a collection of groups.

It is noteworthy that many of the particular characteristics that people recognise in current social media can be traced back several decades:

- User lists and profiles: Standard in unix servers since the late 1970s (commands like 'who' and 'finger' and the .project and .plan files).

- Online advertisements: In the mid–1980s, when text-only services were the norm, Prodigy was a forerunner in online advertisements, as the service included a graphics package that was preloaded on the user's computer so that ads could be presented in a rich graphical environment.[134]

- Micro-payments: Ted Nelson coined the notion of micropayments for his global hypertext network called Xanadu, in which text authors would retain copyright and get royalties—in other words, be credited with tiny payments for their input as other people read and remixed their texts.[135] While Nelson's system never became reality, AOL got a technically different but business-wise similar idea to work: online transactions just became additional fees put on the customer's monthly statement.[136]

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[134] Akera, 2008.
[135] Nelson, 1982.
[136] Haigh, 2008.

- Liberal and countercultural norms: Turner showed how liberal and counter-cultural norms were embedded in the design of the famous WELL bulletin-board system, which was based on 1960s American counterculture.[137]

- Shared spaces for subgroups of users: Research in Groupware and Computer Supported Collaborative Work covered topics such as media spaces, shared workspaces, and collaborative virtual environments.[138]

Even though much of the social media functionality has its roots in systems from previous decades, those systems were different in scale, degree of automation, and societal diffusion. What is new with social media is how it influences and involves a greater variety of devices and information, a greater degree of automation and algorithms, and a greater number of people and everyday practices. This is manifested in new software business models, the incorporation of group communication functionality within the boundaries of one software application, as well as the increased dependency on users, volunteers, and communities.

2.5.3 Users, Volunteers, and Communities

Active users have long been part of the development and use of information and communication technologies. Ceruzzi described how electronics hobbyists and their support networks were central to the diffusion of the first personal computers.[139] The early Internet was shaped by pioneers who liked tinkering with technologies in the spirit of the hacker ethic.[140] Mods and modders create valuable digital game modifications.[141] America Online (AOL) was one of the first to involve a large number of volunteers to monitor e-mail and discussion forums; by 1999 some 15,000 volunteers helped AOL.[142]

Users are creative and contribute to social media in many ways. So far peer production has stirred up many discussions regarding copyright and the value of user contributions in business and the public sector.[143] The aim here though, is to **place user-created content and online communities as part of an ongoing interaction between users and developers**. Few users think of developers as an audience of their content, since their intended audience is often friends, family, and colleagues. However, the content that users create sometimes also shapes specific features of a product or a service, not only the business model.

To study user-created content as part of a user-developer relationship means that it needs to be compared to content created by other stakeholders in development. Designers and users are generally treated as distinct, but interacting groups. Sometimes this is the case, sometimes not. There are case studies in which designers act as users,[144] and users act as designers.[145] Lindsay's study on the TRS–80

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[137]Rheingold, 1993; Turner, 2005.

[138]Andriessen, 2003; Baecker, 1993; Coleman, 1997; Johansen, 1988.

[139]Ceruzzi, 1999.

[140]Himanen, 2001; Levy, 1984.

[141]Postigo, 2007; Sihvonen, 2009.

[142]Postigo, 2003.

[143]Benkler, 2006; Tapscott and Williams, 2010.

[144]Beyer and Holtzblatt, 1995.

[145]Fleischmann, 2006; Lindsay, 2003.

microcomputer shows that users can take over many of the functions of producing and maintaining a technology that developers normally cater for. Twenty years after the original company abandoned the product, users have filled in as designers, producers, marketers, distributors, and technical support.[146]

This phenomenon can be theorised as role hybridisation. Role hybridisation is about the individual's ability to shift from one knowledge domain to another, allowing for simultaneous membership in two otherwise distinct social worlds. The traditional power relationship between designers and users often renders designers as omnipotent and users as victims, or at least dependent on designers' interest in listening to users' articulation of their wants and needs (section 3.1). The participatory design movement aims to alter this power balance. Studies have shown that developers configure users,[147] but also that users configure developers.[148] The point being, it is detrimental to both research and practice with focus on design-use relationships to assume (1) an inside or outside distinction between designers and users, or (2) a constant power dichotomy in place.[149]

Role hybridisation is, however, not enough, since it is not only a question of users and designers. Suchman encouraged researchers and developers to question the designer/user dichotomy.[150] The argument is that if we look close enough, we will notice many intermediary actors who make a technical system possible:

> We need to begin by problematizing the terms 'designer' and 'user' and reconstructing relevant social relations that cross the boundaries between them. Attempts to avoid this conclusion lead to various sorts of surrogates, proxies, stand-in's for 'the user,' designed to allow the creation of usable technologies in the absence of these other relations.[151]

Previous research has identified many cases of intermediary actors between users and developers and developed useful nuances among the users (section 3.1). Some users channel information between other users and technical support staff, while others report that experienced users teach less experienced ones.[152] Stewart and Hyysalo (2008) argue that user-side intermediaries are crucial to innovation success and show how intermediaries affect the shape of new information and communication technologies. Based on the social learning in technological innovation (SLTI) framework, they open up the designer/user dichotomy by mapping various intermediary positions and different types of innovation contexts (e.g., linear development, off the shelf products, user-centred design, technology experiments and co-design, and innofusion/domestication).[153]

These discussions have also been framed as design for community, design by a community, or a question of online community. There are two rather different views on users and online communities. Some authors describe online communit-

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[146]Lindsay, 2003.

[147]Woolgar, 1991.

[148]Mackay, Carne, Beynon-Davies and Tudhope, 2000.

[149]Fleischmann, 2006; Freeman, 2011.

[150]Suchman, 1994b; Suchman, 2002.

[151]Suchman, 2002, p. 94.

[152]Blomberg, 1987; Nardi and Miller, 1991.

[153]Stewart and Hyysalo, 2008; Williams, Stewart and Slack, 2005.

ies as an opportunity for people to meet around a shared interest, break free from geographical barriers to social interaction, and as a gift economy.[154] Other authors point out that some online communities are commercially engineered and that companies make profit on the hours that volunteers spend online, which renders the first mentioned view as too romanticised and ideal.[155] Both views do justice to the studied communities, but they also show how online community is not a homogeneous phenomenon, and like discussions on users, one cannot assume a typical online community power situation. For instance, recent research by Freeman on open-source communities noted a shift from hacker ethic and bazaar governance to a more professionally and strategically regulated community. Freeman also observed how the ambiguous concept of community can become a powerful strategic tool for orienting towards multiple real and imaginary audiences.[156]

The intention here is to steer clear from normative discussions—e.g., what is a 'real' community or what should be the legal status of community contributions—but rather to study the actual roles of users in social media service development, keeping an open mind to both individual and collective actions of users (see the methods sections, 3.1 and 3.2).

2.5.4   Persistent Challenges Accentuated by Social Media

Besides generic guides for Internet-related services,[157] not many studies have been published specifically about social media in human-computer interaction regarding design processes and user involvement, user experience, and user-centred design.[158] Hagen and Robertson pinpoint the challenges to complex and variable contexts of use, emergent design, designer role, and the intertwined nature of design and use.[159] Holzapfel asked whether a user-centred design process is suitable for social interaction design, and researched the processes behind 16 highly successful social media services.[160] Based on brief interviews and secondary sources, he found that most of the services were not designed using a UCD process, given that such a process includes user research, personas, scenarios, prototyping, and testing (Table 2.5 below).

Based on these findings, Holzapfel put forward a number of hypotheses (e.g., 'Self-centred design is a valid approach') and contingency factors that he argues decide whether UCD processes are suitable to social media or not. Although cursory, his brief case studies provide an interesting parallel for this study. Holzapfel's study can be criticised for not covering details about the design process nor the user community, and lacking a change perspective. Services start out as one thing

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[154]Baym, 1995; Rheingold, 1993; Smith and Kollock, 1999.

[155]Campbell, 2011; Postigo, 2003.

[156]Freeman, 2011.

[157]User-centred guidebooks for website design by Garrett, 2011; Krug, 2006, community-building by Kim, 2000, e-government services by OECD, 2009, and even iPhone apps by Ginsburg, 2011. Chan has coined the concept 'social interaction design' for the design of social media based on user experience and interaction design, see Chan, 2007, but the concept remains unclear for research purposes and is not widespread.

[158]Estes, Schade and Nielsen, 2009, provide details about the user experience of messages, notifications, and alerts, but they do not report on the design process.

[159]Hagen and Robertson, 2010.

[160]Holzapfel, 2008.

Table 2.5: Summary of case study findings by Holzapfel, 2008.

Service	Was the service designed using a UCD process?	Was the evolution of the early service based on user feedback?	Was the early design determined largely by the founders' own tastes and needs?
Basecamp	No	No	Yes
Blogger	No	Unknown	Yes
Craigslist	No	Yes	Yes
Delicious	No	Unknown	Yes
DeviantArt	No	Yes	Yes
EBay	No	Yes	No
Facebook	No	Unknown	Unknown
Flickr	No	Yes	Unknown
FriendFeed	No	Unknown	Yes
Gaia Online	No	Yes	Yes
Last.fm	No	Unknown	No
Livejournal	No	Yes	Yes
MySpace	Unknown	Yes	No
Skype	Unknown	Unknown	No
Twitter	No	Unknown	Yes
Wikipedia	No	Yes	No

but develop over time as features, user communities, and development conditions change.

This thesis explores three inherent user involvement challenges that designers encounter in their practice: user categorisation, beyond one project, and pathways of user-created content (see below). These challenges are at the same time persistent, as every product and service design needs to address them, but also accentuated as social media has become mainstream.

User Categorisation in Complex and Variable Contexts of Use

In a perfect world, everyone could contribute to any technology he or she wanted and all relevant social groups would be heard. However, not everyone has the know-how, access, or motivation to participate in technology production. Nor do the producers know in advance whom to contact or have the resources to contact everyone. Also, because people are too heterogenous, the business reality for most companies operating in broad markets is that they cannot serve all potential customers in that market.[161] Instead companies turn to techniques of market segmentation, targeting, and positioning, as well as product differentiation, product mix, and product line management.[162] This results in a inherent tensions for user involvement. On the one hand, designers are asked to engage and empathise with real people, but on the other hand, successful business requires selling the product or services to more than one person. This means an inevitable abstraction process,

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[161] Hippel, 2005, Ch 3.
[162] Kotler, 1997.

away from the specific settings of unique individual users. Besides the mentioned market and product decisions, user groups and categories are ways of dealing with this abstraction.[163]

User categorisation is sometimes done explicitly, sometimes implicitly. The most formalised user categories can be found in interactive systems that rely on built-in user models, which are used to provide personalisation of news feeds or product recommendations, for instance.[164] Still explicitly written down, but perhaps not as formalised, user categorisations are recommended by user-centred and similar design approaches that encourage the multidisciplinary design team to seek and represent stereotypical users and their practices with, for instance, scenarios,[165] use cases,[166] and persona descriptions.[167] Empathic design is all about steering clear of (1) assuming that 'everyone else is just like us', and (2) 'people are so different from ourselves that we think of them as "them"'.[168] Regarding implicit user categorisation, Akrich argued that the user is always present in the design process, not in a physical sense, but that it is impossible to design anything without an idea of how the end result is going to be used. When designers use themselves as an example user, Akrich called that I-methodology.[169]

The previous sections in this chapter gave an overview on three user involvement approaches, which all have different strategies for one aspect of user categorisation: selecting a sample of users to work with. In the lead-user methodology, users are selected with respect to relevant market trends; in participatory design, with respect to job role and organisational power; in user-centred design, with respect to cognitive and physical attributes or tasks, for instance. What becomes of these strategies in the context of social media?

Social media accentuates the dilemma of user categorisation in software product and service development. The number of potential users involved is greater in social media applications compared to many prior software development markets. With the new communication possibilities of social media, a broader part of everyday life than before potentially becomes computer-mediated. With this increased computer-mediation of everyday life it becomes more complex to get an overview of user practices, which means more difficult user categorisations.

Dynamics beyond the Scope of One Project

A dominant way of structuring the use of methods to learn about users and co-design with users has been to use project phases more or less tied to the so-called software lifecycle (acquisition and supply; development: requirements analysis, architectural design, and qualification testing; and maintenance-operation). Very little is known about user involvement practices beyond the scope of one project. It is assumed that in the beginning of a project, the design scope is open and there

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[163]Pollock, Williams and D'Adderio, 2007, call this 'generification'.

[164]Allen, 1990.

[165]Carroll, 1995.

[166]Cockburn, 2001.

[167]Cooper, 1999; Pruitt and Adlin, 2006.

[168]Fulton Suri, 2003, p. 52.

[169]Akrich, 1995.

is little knowledge about users. At the end of the project, it is assumed that the design scope is closed and that designers know a lot about users.

The aim here is to contest and develop the notion of the project as a basis for user involvement guidelines and advice. While the stand-alone project is probably the right way of abstracting experiences for software contractors and usability consultants who work with many different one-off projects, the situation is different for those who operate services for a longer duration of time. One can speculate that, over time, knowledge about users aggregates in an organisation, which would reduce the need for succedent user studies. On the other hand, with social media service success follows a large number of users, which suggests increased complexity and heterogeneity, which would then again increase the need for user studies.

For these reasons, the following questions become relevant: How does user involvement evolve over time? Can one rely on informal engagement with users or are formal user involvement methods necessary? Which aspects shapes user involvement method selection?

Pathways of User-Created Content and Contributions

The characteristics of social media enable a study of user-created content and its development pathways. Social media is different compared to many other software products and previous studies of user-developer relations. The time period between releases is often counted in weeks or months, compared to years, and many social media services rely on user-created content. This means that user feedback and what the users do have a greater potential to influence a social media service or product compared to other developer–user settings. It also means that it becomes possible to study several iterations of design and use within the timespan of a research project. As a consequence it becomes possible to map out not only what content is created by whom, but different developer reactions to user-created content, development pathways of that content, and boundary shifts taking place between developers and users in who creates what content. In social media applications, the pathways of user-created content becomes a key part of the characterisation of the user-developer relationship.

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Researching Habbo: Case Study Design

This research is driven by two controversies outlined in chapter 1 and chapter 2. The first one is about the vast masses of unusable and complicated software that make our everyday experience of computers less than optimal. A central claim of many who want to improve the situation is that developers lack knowledge about users and use practices. A consequence is the debate on whether and how the innovation process can be democratised. Several remedies have been proposed, prominently mostly within user-centred design, participatory design, and user innovation research. What these approaches have in common is a belief that developers should involve users, the sooner the better. Some argue that a design project must not start coding on day one, but that one should do some (or a lot of) research up front first. On the other hand, current popular software methods in the industry favour so-called agile processes, where coding starts immediately and research comes later, as needed. The question is when and how one should do research on use practices for design.

The second controversy is about the nature of social media. Sometimes social media is said to be user-driven, and other times it is said to be developer-driven. Both claims have strong supporting evidence, but there is no evident underlying explanation for how these claims can coexist or be resolved. This matter is of importance to social media development companies and related education. Should companies embrace a developer-driven culture, like Facebook has done,[1] or open up the process for user participation, or even go for open design?

How can one get answers to these normative questions? The first step is to convert these questions into researchable questions, and the second step is to make methodological choices. To have a basis for shedding light on the above controversies, we need further understanding of the following questions examined in this thesis:

- **How do users' actions in and around a social media service shape its design?**
- **How do social media developers' user involvement practices evolve over time?**
- **How does user categorisation change with social media?**

I arrived at these questions starting from an interest in the construction of the user (section 3.1). I set out in the field to find out how designers and users encounter

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[1]Lee, 2011.

each other, but as the research progressed I decided to focus on the *changes* in the constructions of the users and the *consequences* of these constructions (e.g., changes in user involvement practices and feature development with particular user constructions in mind).

The literature review in chapter 2 provided several insights about user involvement practices and the role of users. The following observations of the existing literature are noteworthy and have methodological consequences for this thesis work.

(1) There is a bias towards presenting research results in a normative form with unclear connections to actual development practice in the research about user-centred design, user experience, participatory design, and user innovation. There are a lot of guidelines, best practice process guides, teaching books, and ISO standards for development, but it remains *unclear* to what degree and how these are used in development practice.

- Choice: I chose to research real-life software design, and not ponder on the research questions too analytically without grounded research data.

(2) Industry surveys of development practice often only scratch the surface. The questions are often formulated as 'do you use such and such method?', without finding out the reasons for applying a method, and the level of context-sensitivity is the company, not a particular project. The risk is that particular contextual factors or other practices that perform the same function as the method go unnoticed.

- Choice: I chose to start with a case-based qualitative inquiry into software processes, because I wanted to get a deeper understanding of organisational processes and developers' sources for knowledge about users than is possible with a survey approach.

(3) There is a tendency towards studying either use (e.g., research on actual user experience and usability evaluation) or design practice (e.g., methods and processes for controlling IT development or designing for a particular value), not both, nor their interdependence.

- Choice: I chose to study both users and developers, as well as intermediaries. This way I could observe simultaneous changes in both use and development processes and structures.

(4) There is a tendency towards snapshot descriptions in reports of what happened in a pilot project, but not much is known about user involvement practices in the long run. It is unclear which user involvement practices change over time and in changing contexts.

- Choice: I chose to make a long-term commitment to a case. Then it became possible to study several iterations of design and use.

These methodological choices are not mainstream in research on software processes, user-centred design, or information and communication technologies in general. However, I draw on recent emerging research that (1) is grounded in real-life case studies on user-centred design,[2] (2) is interested in what developers

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[2]Righi and James, 2007.

do and how they understand users and related methods,[3] (3) critically examines the so-called user/developer dichotomy and actual power relations,[4] (4) is sensitive to the technologies involved, both regarding affordances and business, as well as changes in them.[5]

These choices led to an explorative case study, a genre that has a long and respectful history in HCI and related fields in opening up new research terrain. In line with this tradition, this thesis also seeks means from social and behavioural sciences to address so-far unaddressed aspects of HCI, in this case informed by science and technology studies in general and the Biography of Artefacts Framework[6] in particular (see section 3.2).

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3.1   Users as Co-constructed

This section clarifies my understanding of the concept of the user. Designers and users are commonly treated as trivial roles in research on design processes, but the question 'Who are the users?' is far from trivial. Depending on who is asking, when and for what purpose, there is a wide range of alternative designations for the users. The ambiguousness of the user has been noted and problematised by a few researchers, and there are several different approaches to studying use-related processes of design and innovation in information and communication technologies.[7]

Recent user-centred design literature defines the user in two major ways. First, users are defined in terms of their knowledge of computers or of a particular computer program: as novice, intermittent, or expert users.[8] Second, a distinction is often made between those who actually operate the computer, the primary users, and the secondary users, who are indirectly affected by the computer system. In addition, Courage and Baxter recommend considering anti-users, those who would not buy or use the product. Hackos and Redish warn against confusing users with buyers, against interacting with surrogate users only, and recommend studying users as members of communities.[9] However, these definitions and also the ISO standard definition of user as a 'person who interacts with the product'[10] underspecify the phenomenon. It is left open for researchers and practitioners to contextually agree on whether the user is understood as particular human beings in particular settings, or target groups imagined by the developers. To remedy these

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[3]Goodman-Deane, John Clarkson, Langdon and Clarke, 2008; Hertzum, Clemmensen, Hornbæk, Kumar, Shi and Yammiyavar, 2011.

[4]Eriksén, 2002; Suchman, 1994b.

[5]Hyysalo, 2010; Pollock and Williams, 2009; Sarvas and Frohlich, 2011; Williams, Stewart and Slack, 2005.

[6]Hyysalo, 2010; Pollock and Williams, 2009.

[7]Hyysalo, 2010; Oudshoorn and Pinch, 2003; Stewart and Williams, 2005; Westrup, 1997.

[8]Shneiderman, 1998.

[9]Courage and Baxter, 2005; Hackos and Redish, 1998.

[10]ISO, 1998, product is considered a synonym of service and system in these standards for designing computer-based interactive systems.

underspecified definitions, I outline five approaches to users: as psychological subjects, social actors, as participants, as lead-users, and as co-constructed.

Users as psychological subjects. In studies where a particular theme in psychology is investigated in a human-computer interaction setting, users become psychological subjects. Typical examples are design as applied perception,[11] motor behavior models,[12] information processing,[13] cognitive function analysis,[14] interruptions,[15] and mental models.[16] In these studies, claims of generalisation are typically made regarding most human beings, without distinctions based on social structures and processes.

Users as social actors. When identities, lifestyles, and social relationships in multiple social contexts become relevant for design, users are treated as social actors. Lamb and Kling have sought to improve on those user concepts that remain limited to individualistic or cognitive dimensions by reconceptualising the user as a social actor.[17] Their view of a social actor is based on four dimensions: affiliations, environments, interactions, and identities.

Users as participants. The definitions of users can also be seen as reflecting design philosophies, as has been the case particularly in the computer-supported cooperative work (CSCW) field.[18] For instance, Mike Hales discusses different conceptions of users based on different design styles: users as clients (the 'specify and deliver' style), users as actor–constructors (the 'enable and empower' style), and users as codesigners (the 'reflect and reinterpret' style).[19] These distinct design styles designate the different ways of users participating in the design. From this perspective, the term user is not about identification but participation in the technology production. The user is seen as a very established category referring to a particular way of participating in technology production. It is not a very favourable position, because traditionally the innovation is seen to flow from the developers via the other stakeholders to the users, and not vice versa.

Users as lead-users. In contrast with many innovation theories, research on user innovations have revealed that a significant part of advances in technology stem from developments and modifications by users.[20] However, this understanding of 'user' is different from the other approaches because what so called lead-users do is defined in relation to specific market trends. Lead-users are said to be ahead of a particular market, where producers and commodities have yet to emerge. However, that means that the fate of the so-called lead-users is undetermined. They can choose to remain users, become entrepreneur-developers, or share their innovation with a company or in so-called user communities.[21] The lead-user perspective highlights the ability of users to innovate, but differs from the participatory per-

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[11] Ware, 2003.

[12] MacKenzie, 2003.

[13] John, 2003.

[14] Boy, 1998.

[15] Oulasvirta and Saariluoma, 2006.

[16] Norman, 1988; Payne, 2003.

[17] Lamb and Kling, 2003.

[18] Mackay, Carne, Beynon-Davies and Tudhope, 2000.

[19] Hales, 1994, p. 155.

[20] Hippel, 1988; Hippel, 2005.

[21] Heiskanen, Hyysalo, Kotro and Repo, 2010.

spective both in the assumed power relations and desirable ways for companies to engage with these users.

Users as co-constructed. Since the early 1990s, some researchers have shaped an approach that studies the 'configuring of the user'. The argument is that qualitative research should not take a category such as the user as given, but instead acknow-ledge the considerable work that has gone into its constitution.[22] This implies a distinction between the users as imagined by the developers and the users who actually use the system, including an analysis of their interrelations.[23] Woolgar coined the notion of configuring for the process of 'defining the identity of putative users, and setting the constraints upon their likely future actions'.[24] His work is an important theoretical move for studying how users are imagined in computer systems development.[25] Williams, Stewart, and Slack warn against the tendency of the early work[26] to demonise designers as omnipotent manipulators of users, which they see as a consequence of studying snapshots of design or use processes. They argue that technologies should be seen and studied as sums of many projects, configurations of previous technical frameworks, and never complete. All actors involved at multiple locations need to be considered, as well as their interrelations, while remembering that information about the users is typically incomplete and uncertain.[27]

To sum up, there is no commonly agreed answer to the question 'Who is the user?'. I have outlined five different approaches to the user, finding that especially the reconceptualisation of the user as a social actor is appropriate if the focus is either on design or use alone. When users are seen as participators in computer systems development, the point is that not all stakeholders can participate on an equal basis. When users, designers, technology, organisations, and so on are seen as co-constructed, the point is that the distribution of agency, power, and actors is an empirical question. These perspectives share an implicit idea about the 'user'— that is, only in entering into relationships with technology or its development (either by using or being imagined to use) do people (or imagined people) become users. The notion of the user thus does crucially important work in making groups of people relevant to technology design and pointing to how the 'user' or 'usership' changes in the course of the evolution of a technology.[28] The five perspectives highlight the fact that we need to make the relevant aspects of the user explicit, both theoretically and empirically. Only this way can we understand, for instance, how different aspects of the 'user' relate to each other, how they vary in different contexts and through time.

In this thesis work I have adopted the users-as-co-constructed approach. In the sections to follow, especially 4.1, 4.2, and 4.4, I do not start from an a priori definition of users, but analyse how different relevant actors use Habbo. section 4.1 outlines how the founders and original Habbo developers at Sulake started out as

[22]Westrup, 1997.

[23]Hyysalo, 2004.

[24]Woolgar, 1991, p. 59.

[25]Mackay, Carne, Beynon-Davies and Tudhope, 2000.

[26]Akrich, 1992; Akrich, 1995; Bijker, Hughes and Pinch, 1987; Woolgar, 1991.

[27]Williams, Stewart and Slack, 2005.

[28]Hyysalo, 2010; Stewart and Hyysalo, 2008.

users themselves, and some active Habbo users handled certain functions that later became the responsibility of the producer organisation: moderation and discussion forums. section 4.2 outlines various practices of categorising users. section 4.4 takes a content creation perspective to Habbo actors, and defines users through their emergent content creation capacities.

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3.2 Borrowing from Science and Technology Studies

The standpoint outlined in the previous section, considering both users and developers as co-constructed and configured, was borrowed from science and technology studies. In this I join a long row of reflective human-computer interaction researchers who have strived to broaden the field in various ways (as described in section 2.2)—for instance, CSCW and the 'turn to the social',[29] values in design,[30] reflective HCI practice,[31] and the 'X considered harmful' debates.[32] The ambitions have been to surface the often-unstated assumptions and values embedded in human-computer interaction, both assumptions in the research field itself and in the advice and guidance produced to inform design practice. In many cases these reflections have been rooted in the multidisciplinary field of science and technology studies (STS), a blend of social sciences, history, and philosophy, that studies the relationship between society and technology—or put in other words, the interaction between technology and the social.[33]

Many classical STS papers concern values in design, but although eye-opening, some unresolved issues make the lessons difficult to apply in HCI and design practice. It has been established that artefacts carry/embody a political agenda, which is clearly visible in reproductive,[34] military,[35] and energy technologies.[36] For designers, architects, and engineers this is not news, since they are used to juggling many kinds of values (business value, cost-efficiency, aesthetics, ecological concerns, and build quality, to name a few) and their always messy operationalisations (functional and non-functional requirements, user needs, design goals, constraints, etc.). However, STS studies point to emergent values of technologies that may not be on the design agenda, but rather emerge as unintended consequences. HCI and STS share the same concern that not much is known about the evolution of design agendas of particular projects, since many of them remain business secrets until years later. The lack of knowledge about how values and 'understandings of the users' flow through a design organisation and get embodied into technologies

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[29]Bannon, 1992; Button, 1993; Dittrich, Floyd and Klischewski, 2002; Thomas, 1995.

[30]Friedman, 1997; Gilmore, Cockton, Churchill, Kujala, Henderson and Hammontree, 2008.

[31]Dittrich, Floyd and Klischewski, 2002; Dourish, 2006; Sengers, Boehner, David and Kaye, 2005; Sengers, McCarthy and Dourish, 2006; Suchman, 2002.

[32]Crabtree, Rodden, Tolmie and Button, 2009; Greenberg and Buxton, 2008; Kaptelinin, 1992; Norman, 2005.

[33]Hackett, Amsterdamska, Lynch and Wajcman, 2008.

[34]Oudshoorn, 1999.

[35]Fallows, 1999; MacKenzie, 1999.

[36]Hoogma, Kemp, Schot and Truffer, 2002; Winner, 1982.

makes it difficult to draw conclusions about steering design and technologies in any direction.

Another avenue in which HCI debates about users, user groups, and user involvement can benefit is the STS discussions on classification. One mechanism that is thought to influence the embodiment of values in design is the process of classification and categorisation during design. Researchers have discussed how the categories we use—to talk about activities, experiences, objects, and people (i.e., how we name and classify things)—are critical to understanding.[37] Software design relies heavily on abstraction and classification, not only regarding information and database design, but also for understanding use practices. Because it is not generally considered feasible to work with all potential future users, designers strive to include a representative sample of the user population in design. Already this basic step of deciding which users to involve is a matter of classification. Different design methodologies have different ideas for constructing the sample, which is an interesting research topic in itself. Here, though, the focus of section 4.2 is on the categorisation of Habbo users, which is particularly interesting since the sheer number of potential users for social media applications makes sampling difficult.

STS has many contributions to technology stakeholder identification and analysis, which is one of key practices of user involvement and certain kinds HCI research. In the 1980s, a framework for the social construction of technology (SCOT) was proposed to understand different meanings ascribed to technology by various relevant social groups.[38] The SCOT framework also applied the notion of closure,[39] which refers to when the meanings of an artefact stabilise among the relevant social groups. SCOT has been critiqued and further developed, and is not used precisely in its original form today.[40] However, SCOT introduced an interesting notation for problems, artefacts, solutions, and relevant social groups that I applied in subsection 4.1.2 regarding Habbo's first prototype. For the second prototype, some of the artefacts changed, as did many of the relevant social groups.[41] However, over the few next years, Habbo became much more complex, which is why I decided to follow the abstractions that the developers made themselves to make sense and keep track of Habbo (see Table 4.1). This table is more sensitive to changes in materialities of Habbo, along with some of the critique towards SCOT, especially from the proponents of Actor-Network Theory.[42] While Figure 4.3 concentrates on the patterns of standardisation between different Habbo user communities, that abstraction already conflates many, many user groups. Appendix 5.2 and its summary in subsection 4.1.1 open up the diversity of user practices in Habbo, with the aid of yet another STS analysis framework by Clarke.[43] Different

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[37]Bowker and Star, 1999; Suchman, 1994a.

[38]Pinch and Bijker, 1987.

[39]Latour and Woolgar, 1979.

[40]Humphreys, 2005.

[41]The concept of relevant social groups has been criticised, because it is not easy to find criteria for when and why any particular social group is relevant, see Winner, 1993, what makes up a relevant social group, see Hyysalo, 2006, and how relevant social groups are embedded in other social structures, see Klein and Kleinman, 2002; e.g., when did the Mobiles band—crucial for the first Habbo prototype, but less significant for later versions, not to mention current Habbo—stop being relevant, or should it still count as relevant?

[42]Latour, 1992.

[43]Clarke, 2005.

frameworks were explored because of the varying complexity of Habbo at different times.

More recent STS theoretical frameworks overcome prior HCI and STS constraints. HCI has long been concerned with design processes before market launch, and few studies analyse so-called post-deployment usability.[44] SCOT has been criticised for focusing too much on how different social groups think about an artefact, while neglecting that it must be explained what they are able to do with it.[45] Whereas section 4.1 tackles both, the latter point is detailed in subsection 4.4.1. The Biography of Artefacts Framework is one STS approach that overcomes many of the prior constraints.[46] It goes beyond conventional focuses on design or adoption processes only, by following 'the actual packages themselves as they evolve and mature, progress along their lifecycle, and move across sectoral and organisational boundaries'.[47] This is similar to what I have done in my case study, as I have followed particular Habbo features from their visionary beginnings through development, user feedback, and subsequent redevelopment. For instance, in 2004–2005, when planning interviews I focused on the following features: The room Navigator, Habbo Pets, Habbo Club, and Habbo Rollers. However, other interview topics were also the development pathways of Habbo from a user perspective, Sulake internal processes, Habbo user communities, and the fansite landscape.

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3.3   Benefits of an Explorative Case Study

Section 2.5 explored the relationships between software business and user involvement practices. Software business focusing on social media makes a different business context than previous software development contexts. Around 2000, any company starting a social media business had few solid models to lean on. Amazon had already proved that recommender systems worked for online bookstores, the first virtual worlds and massively multiplayer online roleplaying games (Everquest and Ultima Online) had emerged, but otherwise the IT bubble was about to burst. There were, however, a few technological and societal changes that enabled new software business involving 'cool graphics online': computers in the home, broadband access, and maturing animation frameworks due to multimedia CD-ROMs, as well as maturing web browser technologies.

An explorative case study is an excellent tool for understanding the ferment era of new technology business. Research on technological change in various industries suggests a pattern of cyclical technological change, where the pendulum swings between technological discontinuities and dominant designs.[48] One or many technological breakthroughs initiate an era of ferment, which Anderson and Tushman describe as 'an era of intense technical variation and selection, culminating in a single dominant design'. As the technical variation is broad, with

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[44]Chilana, Ko, Wobbrock, Grossman and Fitzmaurice, 2011.

[45]Winner, 1993.

[46]Hyysalo, 2010; Pollock and Williams, 2009.

[47]Pollock and Williams, 2009, p. 80.

[48]Geels and Schot, 2007; Klepper, 1997; Perez, 2010; Tushman and Anderson, 1986; Van de Ven, Polley, Garud and Venkataraman, 1999.

similar uncertainty of business model and organisation, an explorative case study becomes a good match with explorative business. A theory-testing approach could be feasible on well established research topics; however, the link between user involvement practices and business is an underresearched topic. Also theory-testing is difficult to apply or requires a massive research effort on fast-changing research objects such as those in a ferment era.

What does this case represent—that is, what is this case about? Software development in the 2000s? No. There are several, somewhat different respects in which this case is representative:

It is a popular service used by millions of users in many countries. It lives up to the widespread characteristics of popular social media services in general.

One aspect of the 'social' in social media. The company's social media service is typical in the sense that users have a high degree of awareness of what other users are doing in the service (compared to other kinds of products and services where users have limited access to other users' use, see subsection 2.5.2).

Functions that facilitate open-ended user-created content. The social media platform features the necessary functionalities to support user-created content: persistent IDs so that ownership can be maintained between login sessions, as well as enough spaces that users can control and fill with content (see subsection 2.5.2). Despite comparably minimal content design features,[49] Habbo is open-ended and not tightly scripted, which means that users can 'put the pieces together' in their own ways. This implies that we can study the results of this creative freedom of the users, and consider whether and how this form of user action shapes the service.

Additional means to learn about users. This is about certain aspects in the developer-user relationship in a social media context, more precisely what this context brings to the available means for developers to learn about users. Sulake developers, like other operators of popular online services, can (1) log in to their service like users and check what is going on, (2) rely on the user communities to raise important topics in their online debates, and (3) follow real-time statistics of use, e.g. web analytics, virtual asset sales, user-to-user transactions, and other things that are logged. The developers' adoption of these additional means can be contrasted with their use of established ways of learning about users, such as interviewing, observing, and questionnaires.

Accumulation of data about users. Instead of following one project, this case covered several iterations of design and use, with related user research. Previously done user studies have a big influence both on design and succedent user studies. This allows an analysis of how project phases shape the use of user involvement methods.

From self-centred design to design for others. Sulake–Habbo is similar to many other digital startups that have started by developing a service for themselves and their friends, and then later noted that their service has more general value and a broader audience. This shift in development target group, from self and

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[49]Many other virtual worlds, including Second Life, have features that support more extensive world building, the design of objects, and avatar clothes by users. These features have not yet been implemented in Habbo, perhaps due to the risk of losing simplicity in user interface and the comparably low target group age.

close peers to a broad market, is something that has been below the radar in much theorising in the fields of user experience, user-centred design, and participatory design. Research on user innovations has noted this shift, and it has become noted as one potential development path, from lead-user to entrepreneur, but detailed case studies are scarce. This research has followed in detail what all is entailed both in the company and its user relations in the course of moving through that path.

Software as a service and a 'perpetual beta' software development process. From a software business perspective, this case is typical to software-as-a-service accessible over the Internet. The distribution of incremental feature changes to the users can be made low-cost and fairly instant (see sections 2.5 and 2.5.1). This is different from download-and-install software, shrink-wrap software, and embedded software, for instance. With regard to the design process, the case is representative for small teams who do their thing in a few weeks, where many-months-long projects are the exception, not to mention years. This implies that there was an opportunity to follow several small feature development micro-cases both from developer and user perspectives.

Innovation in the fermentation era. From an innovation lifecycle perspective, this case is about the fermentation era, where technological variation is broad and dominant designs have yet to appear. The results are of value to other startup companies and also to bigger organisations with smaller teams working in 'startup mode'. Since software is not yet perfect, new ferment eras are bound to happen again and again (see sections 2.5 and 2.5.1).

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3.4   Mapping Research Questions and Activities

The research started with an activity and continued with another, which both supported all three research questions, namely:

- *Identify important stakeholders, developers, users, and those in between, e.g., intermediaries.* A pilot interview in 2003 with a user revealed the importance of the hotel/community manager, fansite authors, and the volunteer program. Different actors were approached through the following means: interviews, surveys, and online material.

- *Learn about change in the service.* The early history of Sulake headquarters and its digital services was reconstructed based on the first interviews in 2003–2005, but later interviews showed how the service, stakeholders, and practice evolved. These activities are summarised in section 4.1.

To answer the first research question—How do users' actions in and around a social media service shape its design after market launch?—I engaged in the following research activities:

- *Find out what are the users' actions.* This started with pilot interviews, continued with a survey regarding the visitor profile, and a study of online user

forms (details below, section 3.5). This work is reported in articles I, II, IV, V, and summarised in subsection 4.1.1.

- *Collect examples of users' active and inactive roles in feature development.* In the interviews, developers told stories about users shaping the service. The developers' point of view was covered there, whereas the user forums and the user interviews told the story from the point of views of the users. This work is reported in section 4.4.

To answer the second research question—How do social media developers' user involvement practices evolve over time?—I engaged in the following research activities:

- *Learn about online sources.* The pilot interview also revealed the following sources for knowledge about Habbo: an archive of the developer-produced online fan magazine (www.kultakalankuvalehti.com), the archive of Sulake's weekly letter to the community, as well as popular user-created fansites of the time. These are summarised in article I and sections 4.1.4 and 4.2.2.
- *Learn about change in user involvement methods use.* Online sources and various interviews gave a very good picture of the situation in and before 2005. Engagement in development of user feedback mechanisms for Sulake in 2005–2006 deepened that insight. Follow-up interviews in 2007, 2009, and 2010 made it possible to learn what had changed. This is summarised in section 4.3.

To answer the third research question—How does user categorisation change with social media?—I engaged in the following research activities:

- *Learn about Habbo users and consider ways of categorisation.* To have something to compare with and be able to learn from the details of the developer practices, I conducted my own user categorisation project with the idea of retracing the steps of the developers.
- *Find out how designers know about users.* This was uncovered by interviews with game developers and succedent follow-up interviews (details below in section 3.5). A key question of the interviews was 'how do you get user feedback?'. Both of these activities are reported in Article III and summarised in section 4.2.

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3.5   Research Process Details

In the present study on Habbo Hotel, several bodies of data were gathered over the years, and are presented below chronologically so as to do justice to the gradually deepening access to both developer and user communities that could be negotiated during the study.

1. The project started in 2003 with participant observation in Habbo user communities, pilot interviews, community manager interviews (n = 4), and an explorative survey (June 2004) on the visitor profiles (n = 10,000), as Sulake's

first global youth survey was published two years later. I also participated in Habbo, explored the features and their affordances, and analysed default values and users' degrees of freedom. The visits to Habbo occurred, on average, about twice per month throughout the first three-year span of research, and every second month from 2007 onward (for more on user groups, see articles II and V).

2. Fansites became an important source of knowledge about the user communities. In 2004, 173 Finnish Habbo fansites were identified, and 23 of these that were created for a large Habbo audience were analysed in detail (article I). The size of a fan site varied between five and 50 web articles, and the most active sites had forums with thousands of posts. Whereas the survey findings provided background statistics, the fansites and forum discussions provided insight into active user groups and popular activities and on Hotel history. Since its very beginning, Habbo users have maintained several sites devoted to what has changed in the hotel and how, including kinds and looks of furniture, characters, in-game games, and design flaws. These members' own documentation has been carefully followed and stored[50] throughout the eight years of the research.

3. Throughout the research project, I collaborated with other Finnish Habbo researchers doing thesis work on a Habbo topic. One Sulake employee wrote her humanistic master's thesis on communication and action in Habbo.[51] In addition, two youth workers wrote bachelor's theses based on their youth work in Habbo,[52] leading to an evaluation study by Merikivi.[53] The collaboration has provided important secondary sources of Habbo data.

4. In 2005 I conducted thematic two-three-hour interviews with 10 Habbo developers, or about two-thirds of the Habbo game development organisation at the time. Six of the developers interviewed (graphical designers and both client and server developers) had been with the organisation since the beginning, five years earlier, while four developers had about one year of Habbo experience. In conjunction with these interviews, historical materials were collected (e.g., screenshots, access to previous versions, press releases, advertisements, etc.) about the development of Habbo and its predecessors to help construct its development in the years 1999–2003.

5. Having examined the user groups, adjoined sites, and developer practices, the study turned to in-depth interviews with particular users. The users volunteered to participate in interviews in the survey mentioned in step 1. The interviews took the form of two-three-hour individual, pair, and group interviews with 11–16 year-old users (n = 6) and users aged 30 and older (n = 6) to focus on their participation histories, their motivations, the

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[50]Early on I relied on a software that automatically downloads sites from the Internet called Site-Sucker. Later on, instead of downloading whole websites, I limited the capturing to those online texts that I read by using another software in parallel with my browsing, EagleFiler. Regardless of which software I used, text search of the downloaded material was available. EagleFiler had the added benefit of allowing for easy tagging of the downloaded material.

[51]Pietiläinen, 2004.

[52]Koskinen, 2006; Sihvola, 2005.

[53]Merikivi, 2007.

meanings they give to Habbo, groups they participate in, and so forth. The interviewees were invited to the office of the researchers, where they could show the researchers what they normally did in Habbo.

6. Habbo has also been a topic for students in various usability research courses at Helsinki University of Technology, with which the first and second authors are affiliated. Two student efforts are noteworthy: a usability test with new 10–12 year-old users (n = 8) in 2004 and a software engineering effort in 2004–2005 to develop a fansite starter kit for active Habbo users. I mentored the second group and conducted a pair interview in 2007 about the playability testing and usability practices at Sulake.

7. After these activities, I had the opportunity to take part in an intervention study with Sulake. For release 9 of Habbo, in 2006, a set of user feedback methods was explored with different stakeholders inside Sulake. This included confidential datasets: database statistics and surveys from two countries on the use of a new feature. In addition to these research activities, Sulake representatives participated in project partner seminars held every six months, two workshops on virtual economy, and many project meetings arranged by the research project. These meetings made informal discussions and a continuous dialogue with Sulake possible.

Table 3.1 below sums up these data sources.

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3.6   Data Analysis

Taken together, these bodies of data provide us with an excellent view of the varying forms of interchange and dialogue between the varying users and developers of this virtual world. The data analysis has proceeded in multiple waves over the years and on multiple levels. Four broad themes can be distinguished:

- Habbo Service and Sulake Headquarters History (section 4.1)
- Users' online actions in Habbo (sections 4.1 and 4.2)
- Habbo designers' ways of knowing about users (sections 4.2 and 4.3)
- Users' ways of shaping Habbo (sections 4.4 and 4.1).

Habbo Service and Sulake Headquarters History

In contrast with many studies of innovation processes, I had the added benefit of active users documenting the product/service history online. Triangulation and source criticism became key analysis methods. For instance, with the survey data I could debunk user stereotypes found in online texts (section 4.2). Source criticism was key to reading online texts, as, for instance, fansite articles were shaped by both the article author's and the fansite's agendas.

Multiple histories about Habbo can be told. My account is shaped by the access I had to Sulake headquarters in Helsinki, Finland, the insights I got from users active at a particular time period in Habbo, and the online data available to anyone interested in Habbo with a working web browser. Had I approached Habbo a few

Table 3.1: Data sources in this thesis.

Stakeholders	Methods	Years
Users		
11–16 year-olds	4 interviews, 2–3h, 6 interviewees, of which 2 volunteers and 1 fansite author	2003–2005
30+ year-olds	1 group interview, 2–3h, 6 interviewees	2005
Habbo Finland	visitor profile survey, N = 10,000, 6% RR	2004
2 Habbo countries	database statistics, and translated survey	2005–2006
Online Data		
Habbo screenshots	~50 from online participation	2003–2010
Habbo videos	14h screencaptures, user interviews	2004–2005
	1,5h screencaptures, online participation	2003–2008
	~100 videos on youtube.com	2004–2010
Finnish fansites	online analysis of 23 websites	2004
user hackers	15 'crew' and 2 'phishing' websites	2004
misc fansites	~50 webpages and 3400 discussion posts	2003–2010
Developers (Sulake)		
founders	2 theme interviews, 1–2h; one founder	2005
	participated in project meetings	2003–2006
game developers	8 additional theme interviews, 1–2h	2005
	1 interview with devel. director, 1h	2005
community managers	survey, N = 4, 50% RR	2004
	1 pair interview, 1–2h	2005
community director	3 theme interviews, 1–2h	2004–2005
user insight mgr	3 theme interviews, 1–2h	2005, 2010
business	1 pair interview w. user insight mgr, 1h	2005
R&D	1 pair interview w. usability expert, 2h	2007
usability expert	1 pair interview w. R&D rep., 2h	2007
documents	5 slidesets, 1 worksheet, 2 reports, 2 books	2005
Online Data		
fanzine archives	21 issues	2001–2003
weekly letter	85 letters	2004–2006
intro & help pages	33 web articles	
news & press releases	60 web articles	2000–2010
Third parties		
youth workers	2 meetings, 2–3 hours	2005–2006
students	2 Habbo assignment reports, mentoring	2004
media articles	122 articles in main Finnish newspaper	2001–2010
Habbo researchers	data comparison with 3 colleagues	2004–2010
Total		
interviews	24	2003–2010
interviewees	19	2003–2010
surveys	3	2004–2006
images	~10000 images stored, 10% processed	2003–2010
video	20h	2003–2010
website archives	~600 MB (see Online Data above)	2000–2010

years later and, for instance, from the perspective of a particular Sulake country office, this reconstructed Habbo history would certainly be different in terms of the significance of events, development phases, and possibilities to analyse interrelations on various timescales. As part of entering the world of Habbo I learned about numerous discussions on Habbo authenticity—in other words, opinions about who was the first in what respect, what was important, where are Habbo's origins, etc. The following became the most important ones:

- I first learned about Habbo history as a user entering the Habbo world in the fall of 2003, learning from other users directly and through online texts in the user communities and the fansite magazine produced for users by Habbo developers in 2001–2003.

- Through interviews with developers I reconstructed key development projects, design ideas, and what was important when. These were compared with an internal document of the key developments between 2000 and 2003.

- Two Sulake-produced books confirmed the 'grand history' based on the interviews. In 2004 Sulake published a book called Just Another Day—The Story of Habbo Hotel, with a compilation of the public rooms and furniture collections in Habbo. In 2006 a book called Habbo Käsikirja (Finnish for 'handbook') was published, which worked as an introduction for new users and a reference guide. These books compared well with my own lists and screenshots of public rooms and furniture, and included some of the stories of developer–user interaction episodes that I encountered in my own interviews. Informal comparisons of these gave me insight into both interviewee biases and the degree of polished rhetoric found in the published books.

- From 2004 on, the user-created fansite Habborator.org has kept track of changes between different Habbo releases. This 'self-documentation' has been a convenient foundation for comparisons of findings from interviews and observations. To assess the quality of this self-documentation, I compared it with my inside knowledge of the release details in 2004–2006. I found the self-documentation to be a very representative picture of the officially announced changes and have since had no reason to mistrust this source.

Users' Online Actions in Habbo

A significant part of the research has been devoted to making sense of what Habbo users do in Habbo. The analysis started out with the idea of constructing user groups to answer the simple questions of 'who are the Habbo users and what do they do there?', which are common to user research in HCI. Over the years, it turned out that definitive answers to those questions are hard to give. I realized that the question is underspecified and needs more input in terms of 'why do you want to know'. However, these detailed analyses of Habbo users' online actions from various perspectives made it possible to ask and understand the answers to more sensible questions, such as what categories Habbo developers use and why. The different data sources have been analysed from the following angles.

- An initial list of popular activities and user groups was drafted by drawing on fansite articles, established room categories, interviews with users, and Habbo documents by developers (article I), in (emic) Habbo terms.

- Demographics, activities outside Habbo, fansite interest, and Habbo background were compared with online activities through a survey, with the techniques of frequency distribution, cross-tabulation, and cluster analysis (article II).

- Common Habbo fansite elements, size, and lifecycle were outlined based on content analysis in article I.

- Membership categories[54] were analysed and grouped into predefined visual categories (created by Habbo developers), emergent visual categories, and non-visual categories (article II).

- Habbo group activities were distinguished in terms of open–closed, fleeting–durable, hierarchical–democratic, and visible–underground[55] (article II).

- Summary of important aspects in Habbo. When writing up article II, we realised that there are no self-evident ways to group all the users for all design situations. There is simply too much diversity in user practices. Instead of ending up with a fixed set of user groups, the article suggested a number of dimensions important for Habbo users, from which succedent user-grouping activities might start.

- Based on a particular framework from symbolic interactionism[56] we dissected the empirical material in 2007 with reference to nine different actor types: stakeholders of interest, social relations and power structures, discourse formations, norms-regulations-rules, history-tradition-persistence, interactional enablers, communicational forms, business models, and non-human actants. (See Appendix 5.2 and subsection 4.1.1).

- The interviewed Habbo users were analysed with regard to their Habbo careers (i.e., membership trajectories), which entailed how their motivations changed over time. Article VII outlines these in five stages: first encounters, early position, establishing presence, continued involvement, and waning participation.

Designers' Ways of Knowing about Users

Here I am analysing the answers to my questions to the developers regarding their understanding of the Habbo communities, getting user feedback, and finding out what users expect. Instead of going into details regarding utterances or mental models, I became interested in how these practices changed over time and the change factors.

Whereas the first research activities supported insight into Habbo user practices, the interviews with Habbo founders, developers, community managers, and others provided multiple insider perspectives to Habbo. An initial list of ways of getting

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[54]Baker, 2004.

[55]Bartle, 2004; Strauss, 1978.

[56]Clarke, 2005.

user feedback was drafted after the theme interviews with Habbo developers in 2005. Differences among developers in the forms of interaction with users were noted and interpreted in connection with work role (e.g., graphics designer, user interface programmer, server coder) and years of experience at Sulake.

In 2005 it was evident that user involvement practices had changed a lot since market launch, but it was not until follow-up interviews in 2007, 2009, and 2010 that I could assess the stability of the practices over time. To explain and make sense of the changes, different phases of Habbo's service evolution were outlined (article VI and section 4.3).

In addition to coding the interviews in themes, the descriptions of developer responses and their changes were systematically compared across different interviewees. This triangulation[57] provided a relatively coherent picture of the methods used in different times even as there were variations to which methods different professionals used.

In 2006 and 2008 Sulake published two market surveys on Habbo activities, which provided additional sources of comparison. For instance, there was considerable overlap between my cluster analysis (subsection 4.2.1) and the lifestyles in the 2006 survey. These reports concerned Habbo demographics and pop culture in different countries, and compared the Finnish hotel with the other hotels.

Users' Ways of Shaping Habbo

In this part, the analysis has been fairly detailed to catch the nuances and avoid too broad generalisations about users' role in social media. Fairly uncommon ways of getting insight into users' ways of shaping Habbo are presented: a detailed analysis of user-created content, how developers use it as design inspiration, and how users sometimes perform functions normally associated with developers.

One subanalysis of what users do in Habbo is the question of what content users create. Content is here understood as any user action that the Habbo system gets some kind of record about. This varies between moving around in Habbo, chatting, decorating rooms, organising events, and so on. Of particular interest was to understand how user-created content diffuses in Habbo, which is why an analysis focusing on content visibility (ranging from private to a user to public in a Habbo hotel) and the temporal dimension (only temporary content vs. more lasting content) was made (subsection 4.4.1).

In addition to what content users create, one can ask how well it fits the intentions of developers. Articles I and II already showed that users are creative and bring in their own themes and backgrounds to Habbo. In articles V and VII we analysed in detail two examples of tweaking and subverting Habbo: gothic play and playacting horse girls (subsection 4.4.2).

A slowly paced dialogue between developers and users developed through the Habbo material. During the research I collected examples of how users developed an idea starting from something the developers made. Sometimes developers picked up these ideas suggested by users and implemented them as features in the hotel. Different pathways of user-created content are outlined in subsection 4.4.3.

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[57]Denzin, 1970.

Some users are more active than other users, and sometimes certain users take over functions usually assigned to developers. Section 4.4.4 discusses these boundary shifts between developers and users by examining the role of fansites in community management.

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3.7 Notes on Quality and Ethics

Due to the diversity in the forms of qualitative studies, widely accepted quality standards and criteria have yet to appear.[58] Instead, many researchers have moved towards explaining their strategies for managing quality and how they reduce the risk of researcher bias.[59] In the following paragraphs I will elaborate on the quality strategies adopted here, e.g., triangulation[60] and communicative validation,[61] as well as related ethical concerns.

In terms of data and method triangulation, I benefited from 'naturally occurring data' (fansites, Sulake documents, books, and reports) and complemented it with a mixed methods approach with multiple data sources (interviews, surveys, and participant observation), as presented in the previous sections (3.5 and 3.6). Investigator and theory triangulation took place as I collaborated with Toiskallio (study design, data collection, and early analysis in 2003–2005), the Privacy-in-the-Making project (2006–2010 see Appendix 5.2) and pursued different theoretical perspectives (e.g. consumption, subcultures, and symbolic interactionism) with article co-authors. These triangulations allowed me to sustain the search for appropriate social science research methodologies to capture the changing forms of user involvement as service and user relations evolved, as well as to pick up particular emerging issues.

Purposive sampling was used as emergent insights from one data source guided the sampling of the next data source (section 3.5). For instance, before doing the game development interviews in 2005, I had prepared by following the user comments on feature changes in 2003 and 2004, with the idea to get the inside story in the developer interviews. So I did, and this inside perspective continued strong until mid–2006, when the MC^2 research project ended and access to developers was renegotiated.

The following multiple purposive sampling strategies were employed: (1) Game development interviews: one of Sulake's co-founders nominated 10 developers

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[58]Flick, 2009; Seale, Gobo, Gubrium and Silverman, 2004.

[59]Flick, 2007.

[60]The concept of triangulation was first presented by Denzin in 1970 as a way of increasing validity, by combining theories and methods in the study of the same phenomena. Through various criticisms the concept has been developed and there is consensus that one need not assume that different methods represent the 'same' object. Triangulation does not necessarily increase validity nor objectivity, but a combination of theories and methods develops a fuller picture and a more in-depth understanding than using a single method. The resulting prolonged engagement with the research site(s) also provide researchers a chance to reflect on their own biases. Denzin, 1970; Flick, 2009.

[61]Communicative validation refers to conversation about the findings with interview subjects, the general public, and the scientific community of scholars. Such dialogue with relevant stakeholders can reduce the risk of researcher bias and provides an opportunity to assess the credibility and plausibility of interpretations. Communicative validation is not unproblematic, as both confirming and critical comments can be a result of disinterest or power issues. Flick, 2009; Kvale, 1995; Kvale, 2007.

for researcher interviews to be representative with respect to different job roles and age in the organisation. (2) Other Sulake people were suggested to us based on both our task to develop user feedback methods and our research interests: community moderation, user research, playability, and usability evaluation. (3) User interviews: the pilot interview was based on convenience; user moderators as typical representatives of volunteer moderators; and the rest of the interviewed users were selected to represent typical age groups in Habbo. (4) User-created content: typical examples. (5) Fansites: biggest Finnish fansites aimed at a large audience, official and other big international fansites, and Habbo hacker fansites.

The data was analysed on multiple levels: careers of individual users and their reference groups, processes in the producer organisation, service and development headquarters history, careers of particular fansites, pathways of particular features, and user contributions (section 3.6). The analysis also spanned several iterations of design and use. Between 2003 and the end of 2010, there was more than 60 releases[62] with several feature changes per release, which gave plenty of opportunity to follow specific feature iterations.

Communicative validation was practiced in the process of article writing and with interviewees during interviews to increase the credibility and plausibility of the findings. Insights from fansite discussions and prior interviews were discussed with interviewees in subsequent interviews. Article drafts were sent to Sulake and were developed based on the received comments before publishing. Dialogue with the research community was important, as research findings were presented and developed in both research group meetings and at conferences.[63]

Internet inquiry raised additional considerations to quality and ethics, especially concerning field site boundaries and privacy.[64] Some of the early internet studies drew strict boundaries between what takes place online and offline to support the argument that the internet can function as a cultural context, but recent studies increasingly see the internet as an integrated part of everyday life and treat it methodologically, not only as a place, but also as a tool or way of being.[65] However, as Hine notes, the field site is an emergent construction that depends on research interest and the phenomenon under study, which implies that for some research purposes a discussion forum is a valid field site in its own right, for instance.[66] This thesis aims to provide an account of the user–developer relations, where the different articles put different pieces of the puzzle together: Articles I, II, and IV focus on online activities, whereas articles III and VI discuss development practices, and articles V and VII study particular user subcultures.

With respect to the privacy of research subjects, interview situations and surveys are fairly established settings, whereas the privacy expectations in online settings can vary considerably. Elm suggests that online environments can be treated as a continuum on the private–public dimension, where chat rooms and web pages

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[62]Habborator.org has kept track of the release details.

[63]These conference papers and presentations are either drafts of the articles included of this thesis, or explorations of a particular topic: Johnson, 2006a; Johnson, 2006b; Johnson, 2006c; Johnson, 2007; Johnson, 2009; Johnson, 2010; Johnson and Tamminen, 2007; Salovaara, Johnson, Toiskallio, Tiitta and Turpeinen, 2005a; Salovaara, Johnson, Toiskallio, Tiitta and Turpeinen, 2005b.

[64]Markham and Baym, 2009.

[65]Baym, 2005; Hine, 2009; Livingstone, 2008.

[66]Hine, 2009.

that do not require registration are seen as public, while online communities and social networking sites that require registration are seen as semi-public. Online environments and chat rooms protected with access codes are seen as most private.[67] However, this is a complex matter, since (1) people have different understandings of the privacy of spaces, (2) private discussions sometimes take place in public spaces, and (3) computer technologies mediate social interactions in unexpected ways.[68] In this research, all interviews and surveys were reported maintaining the anonymity of the interviewees and respondents. The online survey data was treated according to Finnish national legislation on privacy protection, which includes storing the data safely as well as writing a privacy policy for research aims, sharing it online, and implementing it. Publicly available online data, that is, fansite discussions that any internet user could participate in, were treated as public and quoted with sources identified. Research data from Habbo use sessions was treated as more sensitive and only screenshots were published. Screenshot size in print was considered to make it difficult to identify avatars.

Age became an important consideration in this study in three respects: interviewing minors, age difference in online encounters, and interviewing developers of the same age. Standard practice in youth research requires parental permission for engaging with minors as research subjects. For the user interviews, written parental permission was requested and the online survey was clearly marked as conducted by a research organisation, not the service operator. Parental permission is fairly difficult to acquire for normal chat situations, which is why I did not conduct formal interviews online, but rather asked users in person to show me what they do online and spent time in Habbo as a user and learned about the use experience. The discernible age difference between the author and the majority of the service users made it difficult to chat with unfamiliar users, since my polite and honest answers to inquiries about my real age often led to a waning discussion. As a consequence, I belonged to the crowd in the service that, for varying reasons, tended to participate in more scripted play situations (role-play, furniture trading, and user-created games) or hang out with their own friends, not so keen on socialising with unfamiliar users.

The small age difference between the author and the interviewed developers shaped the interviews, as did other overlaps in background knowledge. For instance, when discussing video games that played an influence in concept design, references to Commodore 64 games from the 1980s were easily communicated. Other shared reference points were software business, programming practices, languages, and tools. This meant that interviewees could communicate certain aspects of their practices through stating the names of technologies (e.g., servlets, Macromedia Director, version control) and only develop the description further if they had applied the technology in a way that differed from standard software engineering practices.

With these words on method I hope to have provided a sense of the degree of robustness of this study. The next chapter gives an overview of the insights and key themes of the articles that form the basis of this thesis.

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[67]Elm, 2009.

[68]Bylund, Johnson, Lehmuskallio, Seipel and Tamminen, 2010; Lehmuskallio, Tamminen and Johnson, 2008.

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Key Themes of Article Contributions

This chapter summarises the article contributions into four key themes. The first theme gives an overview of how Habbo emerged, developed, and evolved in dialogue between developers, users, and other stakeholders. The second theme relates to the research question of investigating social media developers' user categorisations and how they change over time. Both of these themes (sections 4.1 and 4.2) include fairly broad details from the case study in order to make the reading easier for the reader not familiar with the Habbo context.

The third key theme—relating to the notion of project as a basis for user involvement guidelines and advice—raises the abstraction level and moves the focus from the user communities to company practices and their evolution over time. Perhaps the strongest and main arguments of this thesis can be found here, in section 4.3. The last section again brings in more detail about the service, with the aim of giving the reader a deep understanding of the analysed user-created content and contributions.

To sum up, after the service evolution section in 4.1, each succedent section concentrates on and answers one research question, as follows:

- 4.1 Emergence and Co-Constitution of a Social Virtual World: Baseline regarding service evolution and change for the succedent sections.

- 4.2 Challenging the Categorisation of Users: How does user categorisation change with social media?

- 4.3 Beyond the Scope of One Project in User Engagement: How do social media developers' user involvement practices evolve over time?

- 4.4 Pathways of User-Created Content and Contributions: How do users' actions in and around a social media service shape its design after market launch?

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4.1   Emergence and Co-Constitution of a Social Virtual World

This section provides an overview of the life in Habbo, how it came about, who and what were involved in its creation, and how it has developed during the 12 years since the first prototypes. Subsequent sections deepen the themes introduced

here. Special attention is given to changes in the business context and in the user-developer relation.

4.1.1 User Practices in Habbo

What the users do in Habbo is described in many of the articles (II, IV, V, and VII) from different points of view, but a brief summary deserves a place here.

The means for communication in Habbo are very similar to other established social media services, but the combination of different channels and the forms of presentation are unique. Under the unique surface, the communication is based on synchronous and asynchronous communication patterns researched in the fields of CSCW and CMC, such as chat, messages, discussion forums, location-based notes, and user profiles (subsection 2.5.2). The difference compared to media spaces and shared workspaces described in the prior literature is that Habbo is not one shared location, but a collection of many virtual rooms. Habbo is not that unlike so-called multi-user dungeons that were invented in the 1970s, but with the addition of a graphical user interface in a pixelated cartoon style (Figure 4.1).

Figure 4.1: Idyllic image from an online ad for Habbo by Sulake in 2006.

Even though Habbo started out as a graphical chat and grew as users created more hotel rooms, Habbo is not so far from social networking services[1] either. All Habbo users have a Habbo homepage, where they can describe their interests and profile. As Habbo users make friends with other Habbo users, they can formalise this relationship and become Habbo friends in the service through a virtual handshake with a few mouse clicks. Being listed on other users' 'list of friends' enables users to better communicate with each other and see each others status and whereabouts in the service. As discussed in detail in article VII, virtual worlds and other social media are not so easy to distinguish based on feature typologies,[2] since features once considered typical to one kind of service have spread to others as well. This necessitates an increased sensitivity to process and contingency, how activities in virtual worlds are open-ended and not predetermined by game rules.[3]

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[1]boyd and Ellison, 2007.
[2]Elverdam and Aarseth, 2007; Messinger, Stroulia and Lyons, 2008.
[3]Malaby, 2007.

Habbo activities take place either in the meeting places created by Sulake or in rooms and collections of rooms created by users. Users create virtual hotel rooms based on a set of floorplans and decorate the rooms with various pieces of furniture, either acquired through trading or purchased from a Habbo furniture catalogue. The activities vary from child's play to imitating and recreating familiar cultural narratives from sports, TV, and online dating.

The diversity of Habbo actors and activities became apparent early in the research process. The stakeholder identification and analysis process became an ongoing challenge instead of something completed early on. In the same way that the diversity in Habbo was a challenge for this research, it is a continuing challenge for user research at Sulake. For instance, are there any obvious categories of users to design for, given that designers cannot interact with everyone? This is the topic of section 4.2. Appendix 5.2 provides an overview of the stakeholder analysis based on the insight of the research activities.

With the aid of an advanced framework based on the research tradition of symbolic interaction,[4] it was possible to distinguish nine main categories of different actors (see Appendix 5.2). Stakeholders of interest were divided into individuals (e.g., current and previous Habbo users, their parents, and Habbo founders), collectives (e.g., Sulake, its owners, competitors and business aliences, organised groups in Habbo), and implicated/silent actors (e.g., siblings, significant others, friends, school classmates, and celebrities).

The number of users and their demographics were already described in the case description (section 1.3). However, if one considers particular individuals relevant to the service, it is worth noting that prior Habbo users not active anymore, and current Habbo users' parents have a significant influence on the service. The parent is often the paying customer and regulates the teenagers' access to the service. Prior Habbo users left many trails in the system, for instance in the forms of invented Habbo games and taken avatar names.

These different stakeholders talked and wrote about Habbo in markedly different ways. Habbo was presented as a hotel, a game, child's play, a chat, a community, a dating place, a place for collecting and trading furniture, cool graphics online, a crime scene, means for advertising, and so on. These different framings of Habbo shape the expectations of how Habbo is understood and the consequences of entering or supporting Habbo.

Habbo also appeared as different objects when connecting it with different relevant business models, revenue streams, and funding alternatives. User payments and advertisements were obvious in the context of social media, but the history of Habbo also revealed experimentation with business models, such as Sulake customising the game engine as subcontractors for Coca-Cola and Walt Disney, or making merchandising deals with Hollywood. Venture capital, or the lack of it, shaped the Sulake organisation during the whole period, which was very visible in the downsizing maneuvers in 2007 and 2009.

Different stakeholders have different power in relation to the technologies of Habbo, rooms in Habbo, and the regional or national Habbo communities. Certain developers can change the Habbo architecture substantially while moderators and

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[4]Clarke, 2005.

hotel managers can influence the local hotel configuration, whereas users create content (more details in section 4.4). Early on, there was not much specialisation among the developers, but over the years specific roles emerged, such as project manager, art director, IT architect, graphic designer, user interface programmer, and server coder. Likewise, in the Habbo communities several different pathways for gaining fame emerged (see articles II, IV, VII, and subsection 4.1.4).

4.1.2 From Concept Design to Beta

In the early Habbo days, the hotel was developed by a handful of game developers with core competencies in graphic design, Macromedia Shockwave Flash clients, and Java server programming. At first they developed the hotel called Kultakala ('goldfish' in Finnish) for themselves and their friends, but just a year after launch it became popular among teenagers. Through the internationalization of the hotel, the organisation grew, and every country got a local office with a few employees working on moderation, community management, customer relations, and marketing. More administration and business personnel have joined, and since 2005 game development involves more than a dozen game developers.

Habbo was based on two previous launches, Mobiles Disco (October 1999) and a snowball game called Lumisota (February 2000). Mobiles Disco provided the basic hotel infrastructure in the pixelated 'retro' style: rooms, easy navigation from room to room, the chat interface with speech bubbles, and avatar customization and movement inside the rooms. For Lumisota, the developers implemented paying through cell-phone messages, which at the time was a practical solution for the Finnish market. This worked well also for the Finnish Hotel Kultakala (August 2000).

Figure 4.2 below shows the stakeholders involved in the first prototype, Mobiles Disco. The figure is drawn with the notation of Pinch and Bijker,[5] developed to highlight how relevant social groups interpret artefacts differently and the development pathways of problems and solutions. This figure shows how solutions similar to those that the co-founders developed for new media companies, first at To The Point Oy[6] and later at Satama Interactice,[7] became the basis for Mobiles Disco, which was a solution for both Sulake co-founders and their friends' band, called Mobiles.

Mobiles Disco became a proof-of-concept for 'cool animations online' by the Habbo founding developers. The next project, Lumisota, was made while the founding duo was working at advertising agency Taivas and had a customer, the Finnish Internet service provider and mobile phone operator Elisa/Radiolinja.

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[5]Pinch and Bijker, 1984; Pinch and Bijker, 1987.

[6]To The Point Oy was one of the prominent new media companies in Helsinki during the 1990s. It was founded in 1991 and attracted creative people with experience in visual arts and computer graphics, of which some were still in secondary school. The company worked with multimedia and digital communication, such as graphics and animations distributed on information kiosks, multimedia CD-ROMs, and websites. It has been characterized as the first new media 'school' or local society in Helsinki. Mander, 2001.

[7]Satama Interactive was one of the first serious Internet consulting and design companies in Helsinki. This dot-com company was formed in 1997 by a merger of three smaller digital media agencies. It employed several hundreds of people and made a long-standing impact in the new media and digital technology service landscape in Finland. Pelkonen, 2005.
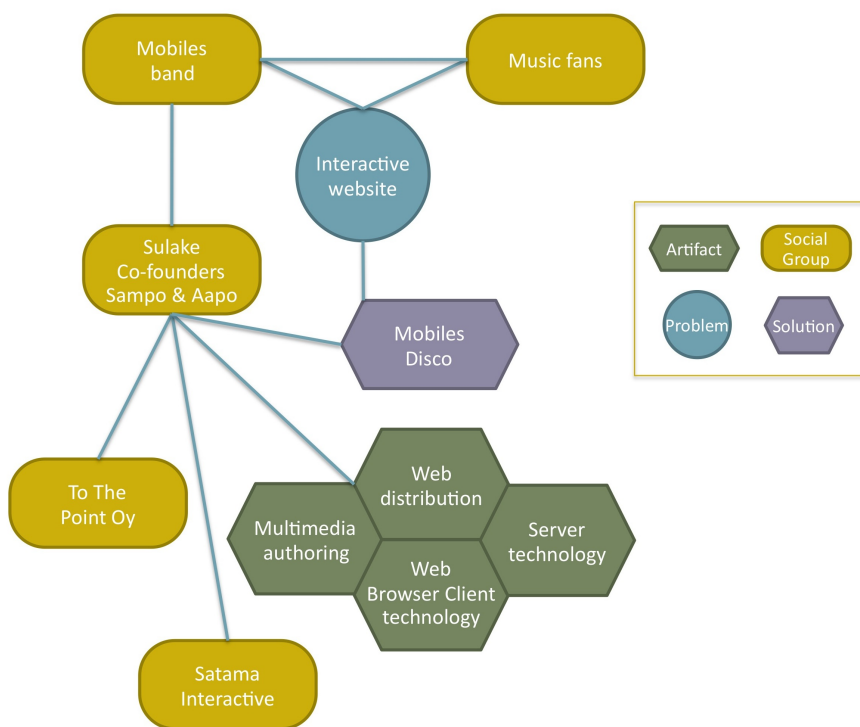
Figure 4.2: Social groups, artefacts, problems, and solutions in the concept design of Mobiles Disco, based on the notation from Pinch and Bijker, 1984.

Some of the stakeholders had changed—the customer for instance, but some stakeholders continued from Mobiles Disco to Lumisota: the founding duo and some users, including active user volunteers.

When the next development, Hotelli Kultakala, was launched, the number and diversity of stakeholders increased. Both strategic and local advertising partnerships were formed and a number of payments mechanisms were implemented. Mobile phone features were added. Development became a more complex matter, as the spreadsheet from one of the founders (Table 4.1) shows. This table shows the important dimensions (rows in the table) of the service to keep track of between late 2000 and early 2003. Hotelli Kultakala had transformed into Habbo Hotel, a name invented for the UK launch. Some developments were country-specific (marked with country code if known and '-' if unknown) and some more generic (marked with a '*').

Table 4.1: Habbo History Squeezed, anonymised version of Sulake co-founder's spreadsheet from 2003.

	2000		2001				2002				2003
	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
Launches	FI		UK		CH						JP
New game features		* * *	* *	* *	*	* * *	* * *		FI	FI UK UK UK	*
User sales enhancements / CRM		* *	UK FI	*			UK	UK UK UK	FI	UK	UK
Strategic Partnerships						UK	UK FI	* FI *			*
Local Advertising Partnerships		FI	UK			UK	UK UK UK UK		- UK UK		-
Technical Improvements								FI		UK CH UK, FI	
Consumer Marketing						UK					
Mobile Phone Features			FI	UK				UK			
Payment Systems											
- SMS -billing		-		-					- - -	- - -	
- Youth cards				- -							
- Other		-		-		- -					

4.1.3 Patterns for Expansion

With the UK hotel also followed the teen invasion[8] of Habbo. It was not designed for teens at first, as illustrated by the developers making furniture sets with bar desks as integral elements and one of the new public rooms being greatly influenced by stereotypical English pubs. The large number of teen visitors also meant a large number of concerned parents. To keep all this together, community management received a lot of attention. A set of guidelines for good behavior was established, called Habbo Way, and tools for governing it were developed. The moderators got their own interface to Habbo, which meant that they did not have to be in the same room to follow a discussion, and a text filter was developed to screen for swear words. The customer service got an automated response system to reduce the amount of personal service needed.

In 2002–2003 Sulake developed its business, the hotel, and the community simultaneously. Strategic partnerships were made, and brands such as Mountain Dew and Britney Spears entered Habbo, the former as a vending machine serving Mountain Dew bottles and the latter as a large poster to be hung on walls. Later these

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[8]In my interviews, developers described the change in target group (and their own marginalisation) as teenagers invading the service.

brands disappeared as Sulake tried another approach by developing Coke Studios for Coca-Cola and Walt Disney Magic Kingdom for Warner Cinema. These were customized versions of the technical game engine behind Habbo, which helped fund the development of the hotel. The hotel's technical architecture was stabilized, and security improvements were made to package the hotel into a product that could be more easily rolled out in new countries.

During 2004–2005 around 10 new hotels and local offices were established in different parts of the world. Habbo actively wanted to become the largest teen brand in the world. The English-speaking UK hotel was split into separate hotels for the US, Canada, and Australia. Also, game development recruited more developers in 2004, and new features were packaged into simultaneous releases in all hotel countries.

The rapid expansion was possible because a 'recipe' for managing a hotel and entering a new market had been developed. Figure 4.3 below sketches the ideal configuration that Sulake strived for. The figure is developed based on my understanding of the organisation and operations around 2005 and 2006. It also shows a feature in different hotel contexts and for different stakeholders.

The figure shows what is centralised (Feature Development and Marketing & Sales) as well as what is duplicated in every user community. At that time, the idea was to launch a Habbo hotel and managed user community in each new country. The country office would take care of the local technical configuration of the hotel, community management, player support, local campaigns, and advertising. To function, the hotel needs to be run on a server and payment mechanisms need to be established. Userside intermediaries (volunteers and fansites) need to be catered to, and the parents of the users need to be convinced about the safety of the service. Other intermediaries also play an important role in Habbo, e.g., from youth workers and other NGOs to the consumer agency and ombudsman in certain hotel countries.

In contrast to the small company where everyone did everything, specialisation had already occurred. Developers specialised in graphics, user interface design, server functionality, or project management. Ads and campaigns were separate from community operations and user insight. The image intends to show that centrally developed features end up in many similarly structured hotels in various countries with various stakeholders and many user groups.

This structure of Habbo separates it from many social media services developed later, where the technical structure is often more centralised and different language versions appear within the same service, not as separate instances of that service. The figure also shows the considerable amount of work (e.g., organisations, country-specific techno-economical infrastructures, and software packaging[9]) needed to make features flow as 'immutable mobiles'[10] between countries.

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[9]In the early stages of Habbo, there was different code on different servers in different countries. Through redevelopment and modularisation, software packaging became possible to standardise feature rollout to the Habbo hotels in various countries.

[10]Latour, 1987.
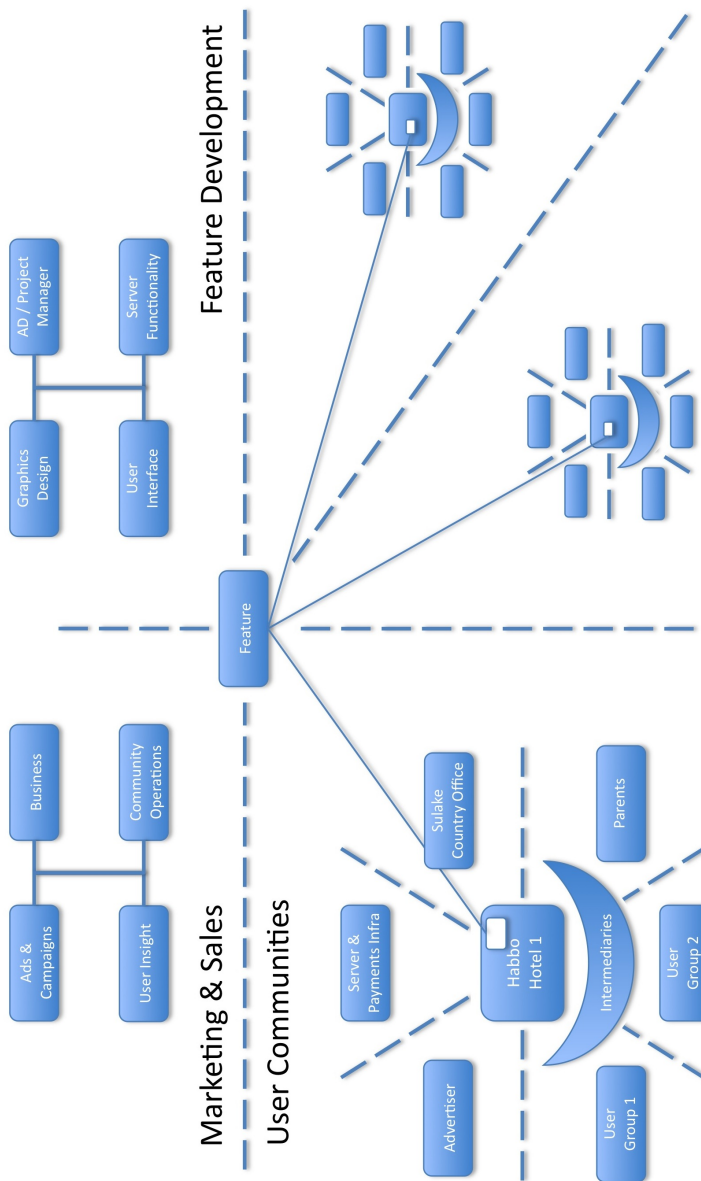
Figure 4.3: Centralised feature development and typical stakeholders of Habbo user communities in 2005–2006.

4.1.4 User Intermediaries: Fansites and Volunteers

Innovation studies have pointed out the importance of intermediaries. Bessant and Rush identified four generic roles of intermediaries: knowledge transfer, knowledge sharing, brokering, and user needs diagnostics.[11] Howells (2006) and Stewart and Hyysalo (2008) have deepened insight into the role of intermediaries.[12] In the history of computing, the crucial role of intermediaries such as hobbyists is well known.[13] In online business, AOL can be seen as the forerunner, at one time managing more than 15,000 volunteers.[14]

Even though Habbo started out with a fairly low number of actors and a close relationship between developers and users, over time the number of actors has grown and more intermediaries have emerged. On the supply side, the first major step was the establishment of the UK country office, with UK specific hotel/ community management and customer support. But how did the user-side intermediaries landscape develop? Here we sum up the role of fansites and volunteers.

Fansites. Every now and then groups of active Habbo users team up and write Habbo-themed websites in the form of blogs, online magazines, or discussion forums. Taken together, these so-called Habbo Fansites[15] make up one of the most interesting things in Habbo for five reasons: their role (1) in Habbo communities, (2) among Sulake developers (subsection 4.2.5), (3) in user research as a data source (subsection 4.2.2), (4) in Sulake's community management strategy (subsection 4.4.4), and (5) in highlighting how functions in the Habbo social worlds have shifted between developers and users (subsection 4.4.4). This subsection, based on article I, explores the role of the fansites in Habbo communites.

Fansites emerged around all Habbo Hotels in their respective countries or language regions. They vary in size and temporality, from small sites with a few web pages that operate for a few weeks to the biggest fansites with hundreds of thousands of page views, readers in more than one country, and that operate for many years. While most fansites remain fairly underground phenomena, the more popular ones can get recognized by Sulake as being an 'Official Habbo Fansite'. In our Habbo survey from Summer 2004, about 50% of the respondents visited some fansite at least once a week. The survey showed that the fansites were at the time broadly known among Habbo users, and many visited them as often as the hotel.

Fansite builders write typically for a large audience, complementing Sulake's official site by providing more detailed information about the hotel from an experienced visitor's point of view. Hints, secrets, and guidelines, and stories about Habbo fashion influence the boundaries for acceptable behavior in Habbo. In addition, some fansites provide a discussion forum, either for all Habbos or for a specific group in Habbo. Thus, the fansites serve four important functions: they complement the official website, strengthen the governance policies of the developers, reproduce and reinforce social positions (like potential Habbo career paths or legitimized visitor groups), and improve the Habbo visitors' awareness of

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[11]Bessant and Rush, 1995.

[12]Howells, 2006; Stewart and Hyysalo, 2008.

[13]Campbell-Kelly, 2003; Ceruzzi, 1999; Friedman and Cornford, 1989.

[14]Postigo, 2003.

[15]*Fansite* is a blend of fan and website, like *fanzine* is a blend of fan and magazine, a nonprofessional and nonofficial publication produced by fans of a particular cultural phenomenon.

the fan cultures around Habbo.

Based on interviews, the fansite builders are motivated with getting approval, getting friends, doing things for fun, using writing skills, and becoming respected. In addition, analysis on format and content of the fansites shows that fansite builders want to connect themselves with the whole Habbo community, be able to influence the ways other people behave in Habbo, provide a place to debate important topics of Habbo, and be able to link avatar names to real persons via fansite content (although not much appreciated by Sulake).

The fansites are not only important to the visitors, but they also play a *considerable role in the game development.* Developers visit them regularly to follow what's going on, reading both articles and forum discussions. Some more active fansite readers among the developers send e-mails to the other developers about interesting articles. Through the fansites developers learn both what users expect and which topics are not discussed, which is important for prioritising features for new releases. However, since not all users visit fansites, it requires careful judgement from the developers' side, and perhaps triangulation with other data sources, to develop an understanding of how representative user comments, requests, and wishes on the fansites are.

The fansites have always been key to Sulake's community managers, who maintain close relations with the biggest fansites. In the early days, fansites performed the roles that Sulake did not have the resources for. As the company grew, Sulake incorporated some of the fansite functionality into its Habbo website, such as discussions forums. Since the addition of user forums to Sulake's Habbo service in 2006–2007, the number of Finnish fansites have been in decline. Not all of the Habbo-themed websites created by users are positive towards Habbo and Sulake, which creates a delicate community management dilemma (more about these topics in subsection 4.4.4, Fansites in Community Management).

Volunteers. For the first five years of Habbo, Sulake leaned on volunteers to moderate the online activities. A volunteer was called 'Hobba', whose function was to mediate conflicts, send warnings to misbehaving Habbos, kick them out of the hotel rooms, or ban them from the hotel.

We interviewed two Hobbas together (theme pair interview 2 hours) and according to them one motivation for becoming a moderator is to take responsibility for the community. Since they are there anyway, they can handle some cheaters as well. Other motivations mentioned are that becoming a Hobba is one way of 'climbing' socially in the community, and to become famous.

In a fansite discussion forum, in a thread about questions to the Hobbas,[16] WildChild asked why the Hobbas became Hobbas:

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WildChild: Why did you moderators become moderators? Isn't
           it quite tough?
Garon:     It's fun of course. No moderator would be a
           moderator if it wasn't fun.
Ferquz:    What do hobbas do in their free-time in Habbo?
Nakki:     They are idle and they chat.
Nerola:    Also for Hobbas being in Habbo is free-time...
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[16]Translated from Finnish to English by the author. Nerokala.com, 2004

In 2005–2006 Sulake brought the moderating function in-house by employing moderators in its country offices. The volunteer program changed, and experienced Habbo users could apply to become 'Habbo eXperts', who did not have moderating powers anymore, but could get into a room that was full. In 2008 the volunteer program changed again, and eXperts became Habbo Guides, who volunteer to welcome new users and explain Habbo's features. In 2009, Guide 'Bots' were introduced, answering basic questions about Habbo. This reflects Thomas Hughes remarks about technological systems: 'Over time, technological systems manage increasingly to incorporate environment into the system, thereby eliminating sources of uncertainty, such as a once free market'.[17]

4.1.5 Service Evolution

As we saw in the previous subsections, what Sulake–Habbo consists of has changed significantly over the years. Habbo started as a pet project for a few developers and their friends, grew to become a popular online world among new media people, and within a few years it became mainstream for a teenage target group. Technical, economical, and organisational bottlenecks were solved so that the service could grow and scale up to become a transnational service. Figure 4.4 below is a developer's drawing describing this service evolution from 2005.

Sometime during 2006 and 2007, the strategies changed again as Sulake entered the social networking market. Not only did Habbo get new social networking features, but Sulake also acquired IRC-Galleria, the most popular social networking service in Finland at the time. As IRC-Galleria users were a little bit older, on average around 20 years old, the strategy to concentrate on teens was opened up to a variety of age groups. The rapid expansion of 2004–2005 stopped and Sulake concentrated on BRIC-countries such as Brazil, Russia, and China. For the first time, in 2007, the organisation was forced to make downsizing maneuvers, as apparently the organisational growth was not sustainable. Figure 4.5 shows the launches and closings of Habbo hotels.

In 2008–2010 Sulake regrouped internally, invented more automation behind the scenes, and introduced a new way of managing transnational hotels. All English-speaking Habbo hotels were merged into one hotel as of mid–2010. This can be seen as a response to a more competitive market, as witnessed by launches of several new sites for teenagers[18] and the increasing popularity of Facebook.

Based on this information, I grouped the service evolution into five stages.

Table 4.2: Habbo Service Evolution.

Concept	Beta	Expansion	Complexity	Competition
1999–2000	2001–2003	2004–2005	2006–2007	2008–2010

Concept refers to the first prototypes in 1999 and 2000: Mobiles Disco, Lumisota, and Hotelli Kultakala. At this time, the development resources were minimal, as the two founding developers created the first proto in their free time after work

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[17]Hughes, 1987, p. 53.

[18]KZero, 2009.
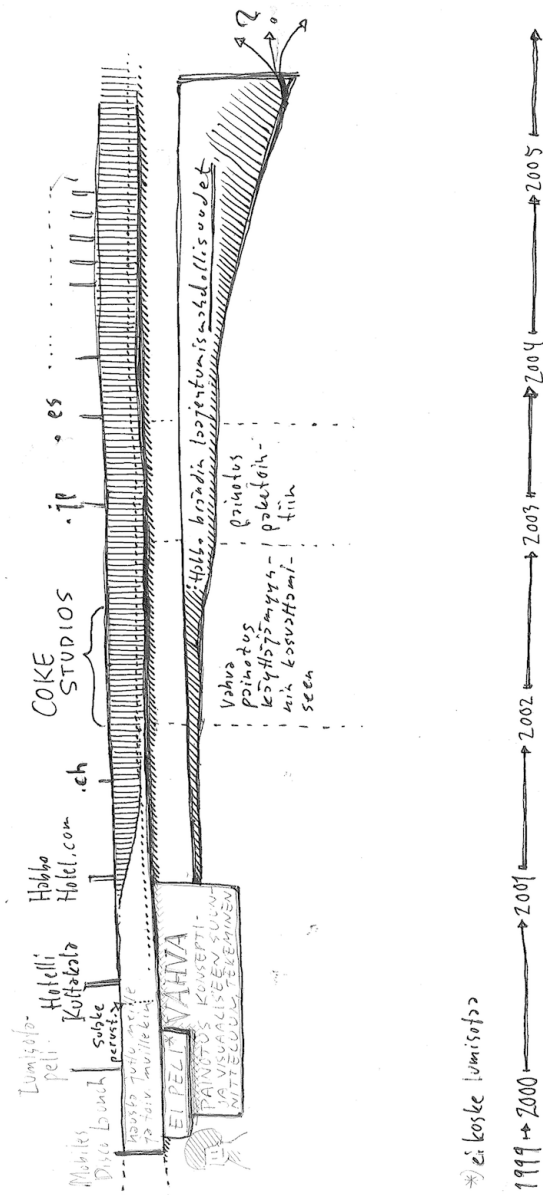
Figure 4.4: Developer's drawing of Habbo evolution, 19.4.2005.
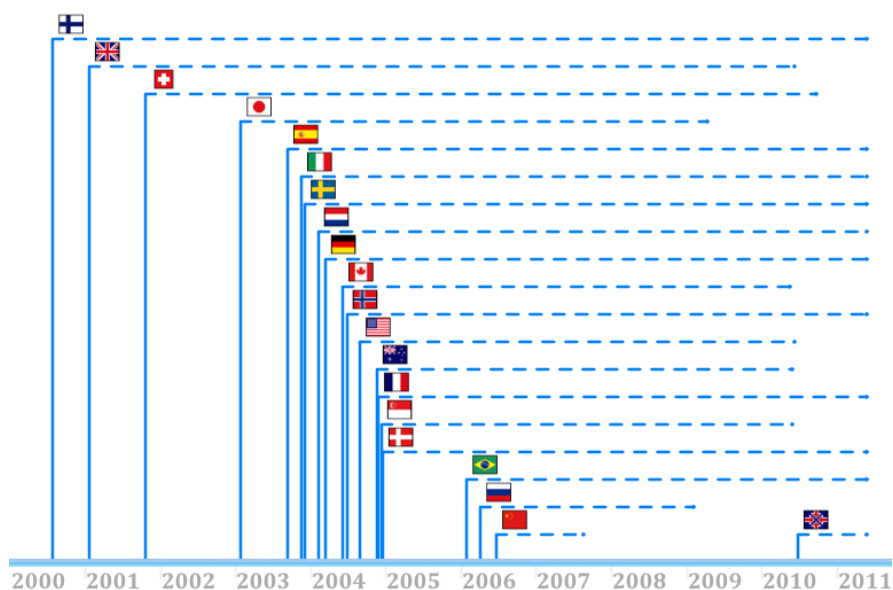
Figure 4.5: Habbo Timeline, based on factsheets at Habbo fansite Habborator.org, 2011.

and during weekends. With the first prototypes money could be raised, the Sulake company was formed, and more developers were hired. It was at this concept stage that the inventions that inaugurated Habbo were created: clever use of browser client-server technology by Macromedia; custom-built rapid animation development tools; and the revenue model of selling virtual items and micropayments via mobile phone text messages. Habbo also got its technological style; it was made to look retro with an air of playfulness through developers' anti-game-development-pattern design choices.

Beta refers to the time period between 2001–2003 when much of the basic functionality was completed. Internationalisation started through a UK partnership, followed by a Swiss partnership. Intermediate projects with a Brazil radio station and Coca-Cola provided more funding to continue development. These projects were also experiments with the business model—that is, selling the so-called software engine behind Habbo with rebranded graphics to Coca-Cola and later Walt Disney (as Walt Disney Magic Kingdom). In 2003, about 50 people worked at Sulake. In this beta stage, in Hughes' terms,[19] more conservative inventions were made, such as solving scalability bottlenecks. The Habbo technology and its accompanying organisational pattern was transfered from the country of origin to other Habbo countries.

Expansion refers to 2004–2005 when the product was packaged so that it made a rollout possible in more than 10 new countries during one year. Before that different code was used in different countries. Earlier software development had made possible synchronized feature releases in different countries. Release management

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[19]Hughes, 1987.

and code centralisation emerged as a development strategy, in contrast to 'different projects and different code'. In this expansion stage technology transfer was made more efficient. Several reverse salients[20] had been identified, of which the web browser client's memory was particularly limiting growth, as memory limited the variety of different pieces of furniture in the service. The client had been optimised earlier, but required continuous tuning, and later, a way of dynamically loading furniture into memory was developed.

Complexity refers to 2006 and onwards, when the product was extended to a social networking service. These four phases were presented in article VI, but based on feedback from Sulake in 2009 and 2010 I felt it necessary to add a new phase: competition. It reflects the increased amount of social media services for children, and that teenagers increasingly adopted Facebook. The details regarding user involvement is outlined in subsection 4.3.4, where new data-driven development techniques replaced some earlier forms of developer engagement in user communities.

4.1.6 Summary

The findings in this section provide the basis for the next sections. There are many things that can be said about the evolution of Habbo, but concerning user involvement, I will highlight three notable findings here.

(1) The wide variety of user practices and stakeholders involved challenges old models of user involvement.

There is no single reason for why users use Habbo, nor a single thing that the users do in Habbo. Instead Habbo appears more like a mini-Internet of its own; there is something for everyone in the target group. In the following two sections I will argue that this increased complexity makes it challenging to follow traditional processes of user involvement—for instance, deciding which users to engage in development.

One emergent model of the Habbo developer-user collaboration could be termed 'online community journalism'.[21] The developers of Habbo encourage Habbo users to report and write article about important topics in Habbo. Instead of the developers having to find out what matters most to the Habbo users through expensive user research, developers can rely on users doing the work. The role of qualitative inquiry is then transformed to being a means for source critique of what the users write about Habbo. More about these observations in the next section.

It appears that seeking good representations (various notations, process flow descriptions, and other transformations of field data for design) for users' actions and activities become less important in computer-mediated services such as Habbo, as the virtual hotels of Habbo themselves already function as adequate user rep-

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[20]Reverse salients are components in the system that have fallen behind or are out of phase with the others; Hughes, 1987.

[21]Thanks goes to David Frolich and the Bespoke Project for this connection.   http://www.bespokeproject.org/

resentations. Anyone can log in and check what is taking place. (More in the next section.[22])

(2) Even though Habbo can be considered 'new' software business, parts of it behave like other technical developments.

In various social media debates, there is a tendency of simplification and reduction, to overestimate the role of one actor, be it users, developers, a particular business model, or advertisers. It is clear that many f(actors) shaped Habbo: not developers alone, not users alone, not technology alone, not business alone.

The evolution of Habbo appears to have followed similar pathways as other large-scale technical systems.[23] *Variations*: Early on it was not clear that Habbo was the concept that was going to make it, as Habbo was but one of many concept variations produced with the same technologies. *Closures and reopenings*: The for many years stable concept of Habbo was reopened as social network features were added in 2006–2007 and later again when making Habbo a Facebook app. *Environment incorporation*: Moderation and discussion forums shifted from being something provided by users to being provided by developers. The design space was not opened completely for every little development project, but rather when radical changes were planned. In section 4.3 I will argue that the degree of design space openness, among other factors, is more relevant to user involvement guidelines and advice than whether it is the beginning, middle, or end of a project.

(3) The 'social distance' between Habbo developers and users has increased.

The developer–user relationship was very different in the beginnings of Habbo compared to Habbo three, five, and 10 years after market launch. Early on, the developers built the service for themselves and their friends. Gradually, more and different stakeholders became relevant to Habbo and various gaps between developers and users emerged: organisational, geographical, age difference, education, and so on. At first these emerging gaps were bridged by developers' active participation in use communities, and volunteer users participating in development, such as moderation of the service. However, later these bridging activities became more rare. From having been insiders in the user subcultures, the developers found that they did no longer know what was 'in' among users. They had become big brothers and sisters of the users, then the responsible adult—excluded socially and culturally, albeit not technically.

These changes in the developer–user relationship can be interpreted as an increase in *social distance*. Here this increase in social distance refers to an increase in uncertainty and unfamiliarity of the other group's practices, resulting from a combination of (1) increased diversity in use practices, (2) an increase in differences between developers and users, (3) decreased developer participation in use prac-

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[22]On the other hand, if over time the diversity of user practices increase, which means that logging in and checking online activities covers a smaller part of the whole, then again aggregate representations become more important.

[23]Hughes, 1987.

tices and vice versa (decreased user participation in development practices), and (4) increased indirect contact between developers and users through both social and technical mediators.[24] The first mentioned aspect, increased diversity in use practices, seems fairly inevitable for successful social media services that facilitate open-ended user-created content, as the number of users and the amounts of local contexts where the service is used increase. However, this case highlights the latter three aspects shaping social distance: difference, participation, and mediators.

The adoption of the concept of social distance between developers and users contributes to the understanding of various gaps between developers and users.[25] This case study shows how the social distance between developers and users can be dynamic and contingent even within the same case. It implies that the developer–user social distance is not an inevitable gap and is more dynamic than, for instance, Norman's and Nielsen's writings suggest.[26]

Some earlier use of social distance and difference, such as in discussions on ethnicity and race,[27] are based on fixed boundaries between inherently different groups. In contrast, this construction of social distance is relational, contingent, and variable. In this sense it is closer to the notion of distance employed in social network analysis, which often is based on interaction frequency and network topology.[28] It is a contextually contingent question whether the social distance is manifested in symmetrical or asymmetrical social relations, which in turn could mean either exploitation or empowerment of users, for instance. Social distance here is not foremost a matter of taste and class, as in Bourdieu's theory of distinction.[29] The use of differences between developers and users here is open to multiple axes of differentiation.

In the following section, I will argue that this increased developer-user social distance has consequences for the categorisation of users, a key activity in user involvement.

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4.2   Challenging the Categorisation of Users

When I started the research on Habbo, key questions on the minds of many were: Who are the Habbo Hotel users? And what is so important in this virtual world that one quarter of the Finnish 10–15 years-old population likes to spend time there regularly? At the time of writing, in 2011, when Facebook has half a billion of users and regional social media around the world come and go, no one asks precisely this question anymore with such curiosity and intensity. It is clear that social media services have become communication media among other forms of mediated communication. Asking this question has become as relevant as asking

[24] Mediators in Latour's sense: 'Mediators transform, translate, distort, and modify the meanings of the elements they are supposed to carry.' Latour, 2005, p. 39.

[25] Grudin, 1991.

[26] Nielsen, 2008; Norman, 1988.

[27] Bogardus, 1925; Park, 1924.

[28] Granovetter, 1973.

[29] Bourdieu, 1984.

who the telephone users are and what is so important on the telephone lines that people talk so much on the phone.

Not that asking who the telephone users are would be a silly question; it is still important to reflect on how media changes our everyday lives and which forms of communication come to reign when, where, and in which situations. Being a telephone user, say, a hundred years ago, would imply significant social status, and an exploration of the demographics of telephone users at the time would probably have made social stratification and particular social networks visible.[30] However, the point I wish to make here is relevant to specific practices in user involvement, product design, and service development, namely the practice of categorising users.

> *Having read this chapter, the reader will be able: … To categorise users.*[31]

One of the first steps of user-centred design and many other forms of user involvement is to identify and categorise users. This first step is proposed because it is considered unrealistic to work with all (potential) users during product lifecycles. Therefore it is deemed necessary to define the characteristics of the user population and work with a representative sample of the user group. Different user involvement approaches[32] have their own strategies for selecting the sample:

- lead-user methodology: select users with respect to relevant market trends
- participatory design: select users with respect to their job role and power attributed to people in similar job roles.
- user-centred design: make selection based on people's cognitive and physical attributes like technology expertise, skills, and demographics, or their tasks and other factors in the context of use model.

The question is, what becomes of these strategies in the context of social media? As social media brings change in design-use relationships, developers need to know when and where to adjust their process to meet the new demands on production and collaboration with users. How can large amounts of simultaneous users be supported technically and socially, as well as represented in design?

One way of approaching this problem area is to study who the social media users are and what they do there. This is the topic of article II. It gives an account of my explorations of the question of user categorisations. The article presents user categorisations based on data from participant observation, a survey, user interviews, and fansite articles.[33] The idea at the time in the research project was to trace the steps of Sulake developers in understanding users, use the additional research resources available, and contribute with sociological insights.

4.2.1   Survey Data: Habbo Visitor Profile

We (Johnson and Toiskallio) started out by exploring Habbo and conducting pilot interviews, ending up with a few preliminary categories: furni collectors, chatters, late-evening party people, mafioso, sheriffs (volunteer moderators), and cheaters.

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[30] Fischer, 1992.

[31] Noyes and Baber, 1999, p. 17.

[32] More detail in chapter 2.

[33] Data described in detail in section 3.5.

The second attempt to find suitable user categorisations was the visitor profile survey (June 2004). Table 4.3 shows the model of the Habbo visitor that I together with my colleague Kalle Toiskallio came up with based on our preliminary interviews and participant observation.

Table 4.3: Model of the Habbo Visitor.

Theme	Survey questions
Traditional background	Age, gender, region
Other activities	School, hobbies, other games, friends
Online Habbo activities	Chatting, furniture, decorating rooms, creating games, making friends
Habbo fansites	Favourite, visit frequency, reading & writing, forum discussions
Habbo background	Age in Habbo, visit frequency, network connection, logon place

These were the dimensions of the user model that the survey was based on. The survey gave us data on how these dimensions were interrelated, e.g., correlate. Based on the survey, we were able to explore a number of different ways of categorising users:

- *Age in Habbo*: We were able to identify a learning curve of about three to four months, after which knowledge and certain opinions about Habbo stabilise.

- *Visit frequency*: The data suggests that those who visit Habbo often are more likely to arrange events, trade furniture, and meet with Habbo-friends outside Habbo. Also, those who visit Habbo rarely are more likely not to want people in their rooms, not to have heard about gangs nor fansites, and not like spending time in their own rooms.

Cluster analysis gave some correlations between demographics and activity in Habbo. Table 4.4 shows six clusters that explained 72% of the survey data.

Table 4.4: Habbo User Groups Based on Cluster Analysis.

Cluster	%	Characterising quote
Oldtimers	15%	'We can log on when we want to, and have been in Habbo forever'
Playmakers	14%	'We like to visit often and arrange events for others'
Silent majority	15%	'We don't want to be disturbing or in anyone's way'
Gangmembers	11%	'I like to spend time in Habbo with my regular gang'
I don't pay	16%	'I don't pay for anything in Habbo'
Older people	1%	'We just want to help keeping this place nice'

However, these clusters were based on all variables, which meant that the background variables (e.g., gender, age, etc.) took over. For instance, when we tried to

create seven clusters instead of six, the next emerging group would have been an all-girls group. To remedy this issue, we decided to analyse background variables separate from Habbo activity variables. An analysis suggested that two dimensions regarding online Habbo activities were more distinguishing than others:

1. privacy – publicity

   - wants privacy for oneself and/or friends vs. wants publicity, to become famous

2. organiser – participant

   - arrange events in one's room vs. doesn't like spending time in one's own room

The survey was also used to debunk categorical statements about boys and girls in Habbo, such as 'boys collect all those furni there, and girls chat' (pair interview 10 Jun 2004). We found that a majority of both boys and girls trade furniture in Habbo.

Although we were satisfied with the survey and what we learned from doing it, the survey still left some questions open. First, we targeted the survey to answer the question 'who are the Habbo users?', not what motivates them to go there. Second, the survey was successful in describing a snapshot of the Habbo community, but community research tells us that the motivations for community members to participate change during their career in the community (see article VII). To answer these questions we studied Habbo fansites and interviewed Habbo users (sections 4.2.2 and 4.2.3).

Third, when doing the explorative survey we did not fully understand the diversity of all the Habbo activities going on. During our analysis we learned that a Habbo 'event', as we called it in the survey, can be broken down into many dimensions. For instance, the event (or series of events, making it more like an activity) can be described in terms of large or small, long-term or temporary, visible or underground, open or closed. Furthermore, the group activity leading up to the event can be hierarchic or democratic, valuing uniqueness or competition, and the purpose of buying furniture and decorating the room varies from just for fun to becoming rich to imitating real-world games. The point being, in the survey, where people answered that they would create an event to get people to visit their rooms, we lacked data on what kind of event they were talking about. Our fansite studies made us wiser in the above respects, as the next section shows.

4.2.2   Learning from Habbo Fansites

In 2004, when I started to analyse Habbo fansites, it was already evident that Habbo was not the only online service with fansites. Fansites had emerged in the US around the single-player game The Sims, where one could create virtual characters and manage their careers and lives. A website called The Sims Resource had a fansite index, where the top four fansites had more than 5 million hits. The fansites offered the latest information about The Sims, including news, articles, reviews, and lots of extensions and modifications to the game for downloading.[34]

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[34]Sihvonen, 2009; TSR, n.d.

Since fansites studies were only beginning to emerge, the research question was fairly general at this stage: Are they useful as sources for user research? We did not focus on technical issues behind the websites, but rather on two subquestions: (1) What kind of content can be found on the fansites? (2) What can we learn about user groups and popular activities?

I identified 173 Finnish fansites, of which 23 fansites aimed at a large audience were selected for closer analysis. Content analysis revealed common fansite elements, which are presented in Table 4.5. Based on the fansite content, it was possible to distinguish eight different user groups and 11 popular activities. Based on this research activity, Johnson and Toiskallio (article I) drew the conclusion that fansites are useful sources for user research, as they complement other sources informing information systems design.

Table 4.5: Common Habbo Fansite Elements (Article II).

Fansite Elements	Description
News and rumors	Fansites are convenient for Habbo visitors who want to reach a large audience, a fast way of spreading information about Habbo happenings (e.g., competitions, pop idols visiting Habbo), new features, news about Sulake.
Participation	The fansite audience is provided ways to comment on the fansite through discussion forums, guest books, polls, etc.
Links	The fansites link to relevant Habbo places: other fansites and the hotels in other countries.
Hints, secrets, guidelines	Fansites teach newcomers both basic and advanced tricks with which to impress others. Guidelines on acceptable behavior are frequent.
Reviews and lists	The fansites keep track of the features and possibilities in Habbo: public spaces, different furniture items, pets, etc.
Histories	Two major histories are told on the fansites: the history of Habbo and the history of that particular fansite
Fashion and celebrities	Habbo 'journalists' interview Habbo celebrities, avatars who have become famous in Habbo, and report on fashionable clothing and activities.
Graphics	Edited screenshot pictures are an integral part of many fansites; some even provide pixel graphics drawing schools.
Habbo fiction	A few fansites write fictional stories about Habbo characters.
About	Who comprises the fansites staff, number of visitors, updates, banners, etc.
Real life	Habbo meetings 'in real life', stuff not about Habbo that is important to teenagers, as well as blogs, e-cards, etc.

Based on the fansites, we clustered the hotel residents into eight groups: (1) furniture traders and collectors, (2) chatters (in public rooms), (3) gang-members and VIPs (insider groups not open to everyone), (4) supervisors with administration powers, (5) cheaters, (6) quiz-makers and players, (7) the hotel manager (a Sulake employee), and (8) celebrities. Similarly, 11 popular activities were identified: trading furniture, casinos, dating, beauty contests, competitions, dice games, team sports, formula tracks, talk shows, clubs and hotels, and orphanages.

More important than the exact details of these listings are two observations about Habbo that they convey: the diverse and commonplace qualities of Habbo. First, there is not one particular Habbo activity that attracts all Habbo visitors, but many different ones. Second, the activities going on in Habbo resemble games with rules and pretend play familiar from schoolyards, playgrounds, youth clubs, and so on.

4.2.3   Interviews with Habbo Users

After the pilot interviews, the survey, and the fansite analysis we continued with interviews[35] with Habbo users. A few dozen persons, of which 12 actually showed up at the researchers' office, were recruited through the survey to participate in focus groups. The interview situation was arranged so that we had a computer with access to Habbo. This meant that the interviewees could show us their Habbo rooms, where they normally go in Habbo, and what they do there.

During the interviews we learned more about the Habbo users' ways of categorising other Habbo users. For instance, we learned about

- *different clothing styles*: punk, gothic, teenie, wannabe, own style
- *Habbo professions*: some Habbo visitors pretend to have a profession in Habbo, which involves decorating their room and behaving according to the selected profession. Some fansites have written articles on this role-playing phenomenon and discussed the following professions: journalist, nurse, TV-show host, bartender, pharmacist, actor, police, doctor, fireman, postman, veterinarian.
- *attitudes towards Habbo furniture*: some find collecting and decorating an end in itself, some as a means for something else (props for role playing, showing status, etc.), and some were indifferent to furniture.
- *visitors from other hotels*: those who speak another language.
- *time of day*: daytime (children with flu at home, mothers), after school (preteens), evening-night (older, best discussions).

During our interviews, we tried to find out whether the users would identify themselves with one particular user category or Habbo activity as presented above. None of the interviewees really accepted being labelled as one particular category, as they all mentioned that they started out doing certain things in Habbo and then moved on to try other things. They claimed that they got bored of playing the same game or keeping the same room activity after a few weeks.

When going through all these different ways of describing the Habbo users, the diversity of the Habbo uses is striking. Answering the question of who the Habbo users are with one particular categorisation does not seem fair. Neither is a simple two-dimensional model enough. What we could do, however, was to provide a summarising list of aspects that are important in Habbo (Table 4.6 below). It is possible to distinguish different user categories based on all of the dimensions in the list. Depending on the motives behind the question, different categorisations can be made. The list can also function as a map for discussing a Habbo career

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[35]Interviews described in more detail in section 3.5.

Table 4.6: Summary of important aspects of Habbo use (Article II).

Aspect	Description
one's own avatar(s)	clothing styles, character description
one's own rooms and furniture	collecting, trading, decorating, browsing the furniture catalogue
Habbo homepage	one's avatar's homepage that is visible to anyone on the web.
friends	school, hobbies, new friends, dating, distant friends
play	beauty contests (popularity), TV shows, games of chance, Habbo-sports, insider clubs, roleplay, playing with the spatiality of the virtual world
Habbo career	celebrities, getting rich, popular room, in a game or gang, being a fansite author, being a Habbo guide
testing boundaries and rules	expressing self, treating others (e.g., cheating, bullying), finding and using glitches in the hotel architecture

with a Habbo user: which aspects drew the user into Habbo, which aspects made the user come back, and so on.

4.2.4   Interviews with Developers

The next step in our research project concerning user categorisation was that in 2005 I did 10 thematic interviews with about two-thirds of the people in game developement at Sulake. During 2005–2006 five shorter interviews regarding user feedback were made with representatives from development, user insight, business, and community management. In 2007 I followed up with a pair interview about usability and playability testing with users together with the usability specialist and a representative from R&D. In 2010 I carried out a follow-up interview with the user insight manager, as well as a few project negotiation meetings with the research coordinator.

These interviews gave insight about changing user involvement practices in development (see more section 4.3), but here I will distill the relevant things from a user categorisation point of view.

I learned that the developers talked about users differently, depending on their job role and depending on how long they had been working for the company. Server developers were farthest away from the users, whereas client developers and graphic designers were closer to the users. Some of the original developers did not talk in one specific set of user categories, but told stories about what users did in certain situations. The more recently hired developers leaned on the user categories created by marketing, since they did not have as much own personal experience to draw from as the more experienced developers.

A server developer also included in-house stakeholders as users. For instance, one part of the developer's job was to develop a back-end system for statistics and hotel configurations, called Housekeeping. For this developer, the hotel manager and others in the country-specific organisations as well as marketing were users, too. Another developer reflected on what different users may or may not have in

common and stated that the only thing users have in common is that they have installed the Shockwave plugin in their web browser. Taken even further, to its logical conclusion, what is common among Habbo users becomes exactly that, the experience of detailed practices in using the service: everybody logs in, everybody customises their Habbo avatar, everybody moves around, everybody types text that emerges as speech bubbles.

Even though many of the developers started out as insiders in the Finnish Habbo community, with internationalisation and growing numbers of users, it became more difficult to keep track of the Habbo users. Informal engagement was no longer enough, and Sulake applied methods such as usability evaluation, market segmentation, and personas (elaborated in section 4.3).

4.2.5 Habbo Developers and the 'Average User'

In the interviews with Habbo developers we found that they visit fansites regularly to follow what's going on, reading both articles and forum discussions. Some of the developers feel a responsibility to check out fansites as part of their job, and send e-mails to other developers about interesting fansite content. Fansite feedback is perceived as immediate compared to other options and especially valued right after new releases, when users discuss new features. Not all developers have equal interests in the fansites, often because of their different work tasks.

In design guidelines, the category 'average user' is mainly used in two ways. On the one hand, it is contrasted with more technically skilled developers, suggesting that developers should remember not to assume too much technical competence among most of the users.[36] On the other hand, in HCI literature a common phrase is, 'There's no such thing as an average user',[37] which can be seen as a warning against reducing identities, practices, and tastes into too abstract user needs. Abstract user needs that are not grounded in particular settings might harmfully shape a design into something that nobody can identify with.[38] However, in my empirical data, yet another aspect of the average user has emerged, which is not about the technical skill of developers or average users, nor about statistical methods to advocate a representative user.[39] In my data, the average user is used in relation to other user groups, not developers. By analysing the following quote, one can better understand the complexities of categorisation practices in design for complex and heterogeneous communities:

> If one goes to the [guest] rooms ... then one gets feedback from the
> average user. But in the forums, the users have used Habbo Hotel for a
> longer time and slightly grown out of it [Habbo] and they have moved on
> to the forums to discuss it. There are the [furniture] collectors, the older
> ones, and the other HC [Habbo Club] users.... I have the impression
> that the opinions are not that black and white among normal users. In
> the forums everything is either extremely great or then it really sucks.
> (Game Developer)

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[36]Spillers, 2006.

[37]Budde, 2004, p. 54.

[38]Cooper, 2003.

[39]Muller, Millen and Strohecker, 2001.

I started the analysis by reading what was stated by the developers about the average user category, and then what this category's relation was to the other mentioned categories. In the above text fragment, the average user category is used twice,[40] first to state that the average user rarely writes in the fansite forums, and then that average users have more nuanced opinions than those expressed in the fansite forums. However, the reason for talking about the average user emerges by reading the whole paragraph. The function of the average user in this text is to contrast that category of users with other mentioned categories: furniture collectors, older users, and Habbo Club users. So, actually the average user cannot be taken literally, since the developer is not talking strictly about the average user of the whole Habbo population, but about the users who are not opinionated furniture collectors, older, or Habbo Club users. This interpretation is supported by the change to talk about 'normal' users.

Based on his experience, this game developer feels there is a large group of users whose opinions do not get voiced in the fansite forums. Still, he feels it is important to include them in the design considerations. The problem is that since they are not so opinionated, they are hard to reach, and not much is known about them. Even though the group is probably as heterogeneous as any other user group, it is difficult to distinguish the subgroups. Therefore they are grouped together as the average user.

Why the name 'average user'? One interpretation is that it implies large masses of users; as the developers want to please as many users as they can, the 'average users' get more emphasis than other more marginal (although well seen and heard) user groups. The designer not only describes the user groups, but also actively constructs and configures the user groups in his speech, while reflecting on the constructed user groups that have influenced his earlier actions. He actively speaks for some users, and devalues other users, who in his perspective can and do speak for themselves.

Akrich argued that successful artefacts depend on the ability of developers to generate user representations and integrate them into their design.[41] She observed many different techniques for creating user representations, both explicit and implicit. The explicit techniques included market surveys and consumer testing, whereas the implicit were the I-methodology, experts, and other products. The term I-methodology exists when the designer puts him/herself in the position of the user and uses his/her own knowledge as a base for design.

On the one hand, the concept of the average user could be seen as manifesting Akrich's I-methodology: when things are uncertain, the designers go with their intuition or feelings based on their own experiences. On the other hand, their knowledge seems to be grounded in their proximity to the users: they can go and look at what's happening in the hotel and they can read the fansites. The fansites give the developers a way of getting a feeling for what the users want by reading between the lines. The developers draw on their cumulative experience, as they were the users themselves in the early Habbo days, and they have been there since.

As a consequence, here in the Habbo case, it becomes hard to tell the difference

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[40] Actually once, but I interpret normal as a qualitative version of the more statistical average and analyze them together.

[41] Akrich, 1992; Akrich, 1995.

between I-methodology and feedback from use, since the designers' reflections repeatedly refer to feedback from experience of use over time. Those who follow the fansites and the activities in the hotel appear as legitimate representatives for the users. The designers balance being representatives for the users, for the business, and for their own interests. Analytic means for grasping this issue further were developed in subsection 4.1.6 through the notion of 'developer–user social distance', where at one end I-methodology is distinct from actual use experience and at the other end the use experience of developers and users holds more similarities than differences.

As a usability designer and researcher, I have been taught that one should never design for the average user. Doing so would probably result in a design that does not fit anyone, because the users are always a heterogeneous group. My first reaction when the game developer started discussing the average user was to shut my ears because it did not make sense. The use of the term 'average user' seemed to contradict HCI guidelines, such as 'know the user' or 'define the user groups'. It seemed like the user opinions at hand were not followed, and the developer designed for the unknown average user. However, by using a membership categories analysis and extending the timeframe of the analysis, I realized that my initial reaction was wrong.

When considering the development history and the developer's experience of feedback from use, it made more sense to see the developer as a representative of the silent majority of the users. The developer brought in the users who did not voice themselves and denoted them by the category 'average user'. In this way, he accomplished his goal of not having to strictly follow the immediate user feedback, which may not reflect the opinions of the majority of silent users, but he also accomplished his goal of considering the previous user feedback based on his experience.

The rhetoric about the silent majority and the user is familiar from other contexts, for instance, in politics. The politicians often argue that they themselves represent the (mythical) citizen and give voice to the silent majority of voters. This might or might not be the case; it depends on the politician's own agenda and its proximity to that of the voters. While the citizen as a concept decontextualizes individual human beings, it also makes it possible to talk about the broader concepts of the rights of citizens and human rights. It appears that the concept of the user works in a similar way, giving developers a way of discussing possibilities and restrictions for all users (e.g., in terms of user access rights, user profiles, and groups visible to the computer system). In addition, as some citizens need more empowerment than others, so do some user groups. In this case study, the 'average user' was not literally the average user of the Habbo population, but denoted those who needed to be voiced.

Figure 4.6 presents a dynamic illustration of the user-developer dialogue through the fansites. The first panel shows some of the user groups on the fansites. In the second panel, the developer discusses the user groups that get voiced on the fansites. The next panel shows the developer creating the 'average user', which in the final panel dominates the other user groups. In this comic strip, the active role (agency) of both the game developer and the average user become visible.

Making the average user bold and larger than the other user groups in the
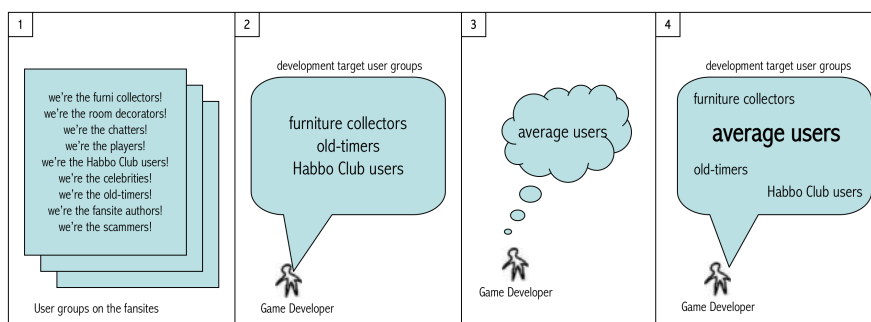
Figure 4.6: Co-constructing the 'average user' and other user groups (article III).

fourth panel symbolises the work the category does. Even though the average user is fairly shapeless and unknown, it seems to direct the design. The developer wants to design for the average users rather than pay much attention to what the opinionated user groups write in the fansite forums. Creating the average user concept is a way of legitimising this. Using the average user in connection to the fansite forums (referring to the users not writing there) also leaves room for more representative user feedback from other sources. Yet another reason for leaving the average user shapeless is perhaps to allow and give room for new designs. Had the average user been completely defined, there would not be room for creativity.

To sum up, the category 'average user' cannot be taken literally. It gets its meanings in relation to the other categories defined and mentioned. These categories are different, as they are locatable in user practices, while the average user is not. Furthermore, the categories are shaped or configured by the developer to fit his aims. At the same time, these configured categories shape the developer, as they keep the design space open.

This study on the developer–user dialogue highlights the importance of the fansites as one user proxy for the Habbo developers. In this case, rather than describing developers as 'malevolent manipulators of users',[42] the case points out their role in balancing and governing different user interests. Digging into the practices of design brings forth its complexity and shows how design and use are intertwined. Over time, the knowledge of the designers is not easily separable into 'own' knowledge versus feedback from use, as design and use knowledge becomes mixed.

4.2.6 Summary

This section summarised my own explorations of categorising Habbo users as well as insight into the user categorisation practices among Habbo developers. Based on this data and analysis I put forward the following observations and arguments.

(1) The social distance between developers and users significantly influences what counts as sensible user categories.

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[42]Stewart and Williams, 2005.

(1a) Developers' early informal engagement and personal experience reframes the need for user categories in social media development.

If the developers start out developing the social media service for themselves and their friends—as many successful services have (subsection 2.5.3)—the need for user categories is reduced, since the developers already have a good understanding of the nuances of the intended and actual use practices.

Sulake developers that were hired later on had a stronger need for user categories, as they did not have the same engagement with the user communities as the founding developers.

(1b) Successful social media services face a need for stricter user categories later on in the service lifecycle.

Even if a service starts out with small social distance between developers and users, later the sheer number of users of a successful service makes it difficult to follow user practices with informal methods.

As the development organisation grows, new people, who do not have the same experience as the founding developers, enter and engage with development, and suddenly the 'familiar' gap[43] between developers and users has emerged. With the developer–user gap development is 'back to normal', the situation assumed in many user involvement approaches, and the role of user categories as both a communication device for user knowledge and a steering device in development emerges.

(2) Advice about categorising users has not fully incorporated the opportunities present in a social media design context.

In a social media design context, like other online services, **three new opportunities for data about users are present: user actions in the service, online user discussions, and server log data**. As online user discussions are often public, they can be analysed with standard methods for text analysis from both a qualitative research and a data mining point of view. Social media service operators have an additional advantage, since they can use web analytics to analyse their server and service logs regarding all sorts of statistics of online user action and activities: site visits, transactions, and use patterns.

This implies that, after the launch of a social media service,

(2a) Developers can use multiple situation-specific user categorisations, instead of relying on one broad categorisation.

Developers have easy access to online user action, so whenever a question of uncertainty comes to mind, a developer can just log on and check what users are doing and writing about just that topic.

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[43]Grudin, 1991; Nielsen, 2008; Norman, 1988.

(2b) Developers need not only rely on a representative sample of the user population, but can also use a census strategy.

Most traditional research in psychology is based on the notion of studying a representative sample of a population. Researchers choose dimensions and criteria for what counts as representative, which guides the selection of people for their studies and the making of generalisations. This strategy was adopted in many user involvement strategies for a good reason. However, the new data sources of social media change this. On some dimensions (those automatically recorded), developers can draw on a full set of observation objects and subjects belonging to a given population (i.e., complete enumeration or census).

Irrespective of whether a service is anonymous or not, users are often required to fill in their age, sex, and location in their user profile. This means that data mining sales statistics for what is trendy among a particular user demographics (e.g., Habbo users who are 14-year-old girls in Sweden or 12-year-old boys in The Netherlands) becomes easy.

(2c) Since census-style data about users is available, the role of traditional qualitative and quantitative user research methods is reframed.

The cost-effective approach becomes to check the census-style data first, e.g., what one can learn from web analytics and data mining the server logs, and then focus surveys and interviews on missing data or unexplainable patterns in the server data. However, as our work in categorising users shows, the analysis of census-style data can be significantly enriched by more sophisticated ways to differentiate users, activities, and roles present in a social media service. Knowing what to look for requires artful integration of census-style data with qualitative inquiry and a sociologically-informed analytic approach.

(2d) Social media data can allow for categorisation of user groups and user pathways.

Since the diversity and time-scale of the data points about users available through social media services are broader than before, developers can start thinking about new things to categorise to enlighten development. For instance, server logs and online data can provide detailed knowledge about the dynamics of social networks as well as the long-term changes in the user actions and activities.

Users do not act alone in social media, which raises the question of categorisation of user groups. If the social media service provides data about social interactions (e.g., friend requests, messaging patterns, transactions between users, and duration of co-location in particular digital spaces) it makes good sense to use social network analysis and design the service for particular pairs and groups[44]

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[44] 'Group' is another overloaded concept that people with different backgrounds treat differently. In marketing, a group can mean any bunch of people with something in common, and in sociology distinctions between membership groups (where the one talking is a member) and reference groups (other groups) are crucial to make, for instance. Here I refer to a more social psychological notion of group, where the members have computer-mediated contact with each other in a service. I am not very particular about the degrees of a shared objective, place-boundedness, collective actions, and other common distinctions. For the purpose of distinguishing, categorising, and designing for these user

instead of particular individuals.

The diversity of user motivations to use a service is broad, but how varied are the potential user pathways of engagement[45] in the service? Users get drawn in to communities for one reason, continue to participate for another reason, become insiders for a third reason, and fade out for yet another reason. Are there regularities in long-term user participation pathways that could be used in social media service design?

(3) User categories are not really characterisations of people, but characterisations of a development–use relationship.

Take the analogy of a dog on the street. A casual observer would call it just that, a dog on the street, to distinguish it from humans, cars, and cats, for instance. A dog-friendly observer could distinguish whether the dog is a labrador retriever, a collie, or something else. A serious dog expert would probably note even more details about the dog, such as whether it is a hybrid breed of some kind, details about its training visible in the dog's posture and behaviour, and so on, and use relevant dog categories. In this way, describing a dog on the street becomes not an objective description, but an encounter where the background of the observer is brought forward in the process of describing the dog.

In the same way users are described in my data from different points of view. A server developer includes in-house marketing people as users, game developers talk about what the users do, and marketing at one point created a lifestyle-focused categorisation.

Researchers have long argued that categories (and artefacts) are not neutral, but have in-built politics.[46] The user is certainly one such category, which is exemplified in the section about the average user, where a developer configures user groups and himself, many use-development relationships in his speech.

User categories are not business-neutral either. For instance, when customer loyalty, acquisition, monetization, and retention become important starting points for user research and resulting user categories, the business values are in-built in user categorisations.

As soon as issues that are deemed significant for the business and development of one particular (social media) service are brought in to guide user categorisation, the categorisations are not made anymore with a starting point in the everyday life of people, but with one particular development-use relationship in mind. Users are not treated as a 'naturally occurring' phenomenon, but issues relevant to the development context guide the categorisation.

As always, the point here is not that there would be anything wrong in Sulake's user categorisation practices, but that there are many kinds of user categorisation practices:

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groups, the important thing is the particular link between users in the service that is counted as a measure of closeness between two or more users (e.g., the above-mentioned friend requests, messaging patterns, transactions between users, and duration of co-location in particular digital spaces), the frequency of interaction (and other interaction patterns) through these links, and the size of the group.

[45]Often called trajectories in symbolic interactionism, and also in the Locales Framework. Fitzpatrick, 2002; Mansfield, Kaplan, Fitzpatrick, Phelps, Fitzpatrick and Taylor, 1997.

[46]Bowker and Star, 1999; Suchman, 1994a; Winner, 1980.

- sometimes user categorisation is like particular kinds of social science, where users are studied as 'naturally occurring' and there is an effort for categorisations that depict users and their practices per se;

- sometimes user categorisations are more subjective in many ways, specific to technologies and business models;

- sometimes 'the user' becomes a melting pot of different stakeholder interests, where there are no obvious user categorisations; and

- sometimes user categorisations become strategic, building on and complementing previous categorisations related to business and R&D needs (the topic of the next section 4.3).

A user researcher needs to know which situation is relevant.

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4.3   Beyond the Scope of One Project in User Engagement

This section opens up a second key topic in this thesis: contesting and developing the notion of the project as a basis for user involvement advice and guidelines. A dominant way of structuring the use of methods to learn about and co-design with users has been to use project phases more or less tied to the so-called software lifecycle (acquisition and supply; development: requirements analysis, architectural design, qualification testing; maintenance-operation).[47] Project management was a key business model/strategy in software development in the mid–1990s; however, the emergence of social media has since changed software development processes and business models. What can we learn from this case regarding long-term user involvement?

In the following subsections I start from my interest in the role of usability evaluations in development. I will analyse how it came about that the service worked well without a formal usability evaluation for four years, why it still became necessary, and why it continues to be part of development. This analysis is in contrast to many user involvement studies where usability evaluations are taken for granted. Because of its grounded nature, the analysis not only covers usability evaluations, but many other encounters between developers and users. These encounters, more or less planned ways for the developers to engage with users, and their changes over time are here the second operationalisation of the user–developer relationship—the user categorisation processes being the first.

The starting point in my interviews with the developers was to focus on encounters between developers and users. I asked the developers where they got design inspiration and user feedback from, and how they knew what the users wanted. The answers to these questions included a wide variety of ways of engagement with the users.

A basic understanding was gained through the developer interviews in 2005, and deepened through project meetings and feedback method work in 2006, but

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[47] ISO, 2002.

it was not until an additional follow-up interview in 2007 that I could figure out which were stable and which were changing practices of user involvement. I learned that the notion of 'project' changed a lot over the years: early on there was no project structure, then came separate customer projects, and after a few years the product–service combination became stabilised enough to enable release management; later on agile development with monthly releases was applied. As there was no stable notion of project to generalise my findings to, I decided to group the service and its evolution into stages. Based on changing dynamics of business, technology, and user communities I came up with the following stages: concept, beta, expansion, complexity, and competition (section 4.1). The next subsections discuss user involvement activities in these stages.

4.3.1 Insight into Early Development Practices

In 2005 when I conducted my first interviews with the Habbo developers, I was surprised to learn that the first usability evaluation of Habbo was conducted in 2004, four years after market launch, and that only recently had usability evaluations become part of the software development process. This is in contrast with one main assumption present in my own professional education in user interface design, usability engineering, and user-centred design. I realised that the standard claim that usability evaluation is a critical part of every successful product or service design process was an overstatement.[48] Here is an online service that had managed successfully without a formal evaluation for four years after market launch and even longer if one counts the first steps in development. What can explain this?

When analysing my interviews and other data sources I found a number of compelling reasons for why usability evaluations were not necessary in the early design phases:

- the low social distance between developers and users, manifested in active users and developers' continuous informal engagement with users
- the characteristics of social media services in general, which here refers to short release cycles due to immediate distribution potential of social media and the efficient mediation of user practices through social media
- the excellence in user interface design and user experience, perhaps due to cultural maturation and mature user interface genre.

These points are further elaborated below.

Low social distance. In the early Habbo days, the developers themselves were part of the Finnish user community, which made direct and active developer–user communication possible. The developers were developing a service for themselves and their friends. Many of the users were professionals in new media, while the current user population of teenagers became the norm in the service only after a year or two. Trusted users, who had a volunteer history from the first Mobiles Disco and Lumisota services, continued as volunteer moderators in Hotelli Kultakala.

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[48]Greenberg and Buxton, 2008, later made similar observations in other development contexts.

The *characteristics of social media*[49] enabled very short release cycles. The lead developers could get an idea, work on it, and put it out for the users still on the same day. Active users, especially volunteer moderators and other insiders, tried out the new feature, and gave immediate feedback to the developers. User activities in Habbo were mediated to the developers through both direct and indirect communication channels. In the same way that users found out what happens where in the hotel, developers could also log on to Habbo and check what is going on through the trend mechanisms.[50] Sales statistics were developed in the server back-end over time as needed by development, marketing, and management. Developers got feedback through e-mail and via visiting user-created fansites.

Excellence in user interface design. The Habbo user interface was modeled after cartoon-like video games in the 1980s—it was minimalistic, pixelated, and had an axonometric view. Navigating in a room and between rooms was made easy, chatting was just writing in a box, and the animated avatars could only go in four directions and did not have many special moves. Basing the design in a proven category, early video games and Commodore 64 style, while adding 'online' and 'multi-user', made an easy-to-use interface. Unique design choices and creative content production were the foundation of a highly rated user experience. In contrast to business products where functionality is more critical than user experience, consumer software often comes with easy-to-use interfaces.[51] So did Habbo, in a combination of simplicity, high graphical ambition, and a pay-as-you-go business model.

The interviews with the developers also revealed informal evaluation practices, such as the Habbo Ladder (see Figure 4.7). The Habbo Ladder was made to contrast Habbo with the comparably higher threshold to start playing massively multiplayer online games at the time. The idea was that during the first few minutes that anyone is willing to spend on a new web service, one should be able to login and create an avatar easily, learn the basic navigation, and have a chat with someone else. Each step on the ladder makes more reasons to return to the service, as a developer explained:

> *Especially if one gets the first friend on the list of friends, then that is a reason to return, that you have really got to know someone with whom you might have had an interesting discussion or of whom an interesting image has been conveyed. Then further on, when you have your own room, well that is of course a real investment, even the notion that you have something own going on there, then that is already a good reason to return, especially if you have decorated the room, really purchased something.* (Interview 19 Apr 2005, translated to English by the author).

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[49]Compared to tangible products, software does not require a separate manufacturing or assembly process where the physical parts are put together. Compared to shrink-wrap software, the distribution of social media and other online services does not require vendors, stores, and installation media (disks, CD-ROMs, DVDs). Compared to client–server softare, social media does not require installations on the client computer, but rather runs in the web browser. (More in section 2.5.)

[50]Throughout the Habbo history, users and developers have created various mechanisms to spot the 'best place to hang out' in Habbo: room lists sorted by popularity or number of co-located avatars, weekly or monthly picks, event marketing on websites and discussion forums, automatically indexed rooms and avatars (tags), and other room categorisations.

[51]Campbell-Kelly, 2003.
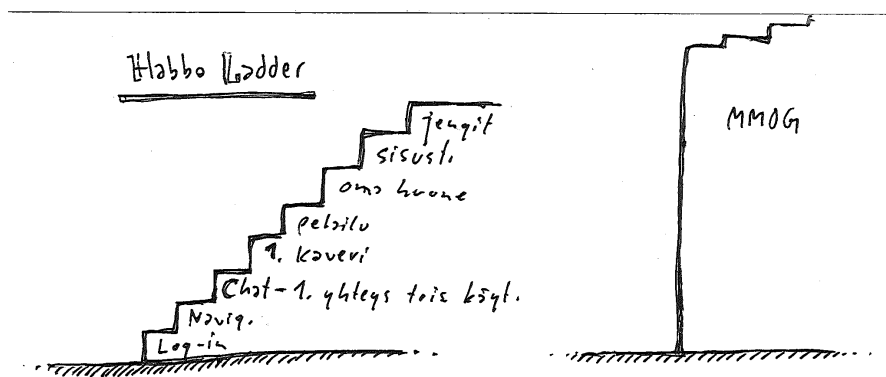
Figure 4.7: Habbo Ladder, drawn by a developer, interview 19 Apr 2005.

The Habbo Ladder is described in article VI, as are the following user involvement practices significant in the early development of Habbo:

- avatar activities,
- developers as users,
- informal evaluations,
- e-mail feedback,
- volunteers,
- volunteer forum,
- weekly newsletter and polls,
- fansites,
- official web fanzine,
- summer meetings,
- sales statistics, and
- customer service.

4.3.2 Expansion and Maturing Development Processes

In the previous subsection we learned that some of the functions that usability evaluation normally has in development—meeting users, seeing others use the software, getting feedback and inspiration—were already in place through other means early on in development. However, during the interviews in 2005, it was already apparent that the situation then was different from early development. Marketing was segmenting the users, usability evaluation had emerged, and beta testing was formalised into release pilots. It was still the same social media service with an easy-to-use interface, but things had changed. What changed in the development context and user involvement methods?

Based on the interviews, I could locate three emerging change themes

- increased social distance between developers and users
  - younger users

- – developer online presence problematic
- – bigger development organisation, more specialisation
- – internationalisation

- technical stabilisation

- more focus on the economics of the development

In the beginning, most users were in their late teens and early 20s, but this changed fast. The product appealed to teenagers—first in the UK, but then also in Finland, younger users became the norm. By 2004, 75% of the users were between 11 and 14 in Finland. This implied that the developers were no longer developing for their own generation, but a younger audience, which made developer experience and in-house testing less adequate as arguments in quality discussions.

Some of the original developers had reached a legendary status in the Finnish Habbo community. This made it virtually impossible for them to spend time online in the hotel, because of too many fans trying to communicate with them at once. Also other development staff members immediately got surrounded by fans unless they were incognito. This development in the community made the immediate developer–user communication more difficult.

During the first four years lots had happened in the development organisation. The company had grown to about 100 employees, each month more than 1 million players visited the hotels, and turnover was 5 million euros in 2003 and almost three times that in 2004. In 2004 the company also expanded to about 10 new countries. More specialisation occurred and not everyone could be involved in the user communities.

Technically, the software architecture had been refactored and rewritten, the administration was easier, and a release process with two or three releases annually had been established. There was less firefighting, more time, and resources available. No longer was there different code in different countries; Habbo had turned into a configurable service where local operators could turn features on and off on demand and new features could be rolled out to all country-specific hotels simultaneously.

Business had become bigger, which meant that there was less margin for error. Also, in contrast with the development situation earlier on, where things worked out well as those in the core group could develop what they were most inspired by, now new feature development had economic measures. Potential impacts on revenues had to be estimated.

With the international expansion emerged a need to know whether the user communities were similar or different in different hotel countries. An outsourced market survey in 2004 generated customer segments and their regional distribution. To prepare for the rapid international expansion that happened during 2004–2005, focus groups were conducted. The applicability of Habbo pixel-style graphics and use of colours was evaluated for the Asian market.

The first usability evaluation in the fall of 2004 was targeted at checking the usability of service registration and those services in Habbo that were subject to a fee from the viewpoint of 10–14-year-olds. This evaluation was one among other quality enhancement and packaging efforts made to ensure that a high-quality

service was duplicated to the 10 new hotel countries in 2004–2005 and that feature distribution could take place in a more controlled manner.

For these reasons it is understandable that more documented knowledge about users and formally tested quality gained importance. This was exemplified by the new process enhancements described in article VI:

- market segmentation through market survey,
- focus groups,
- usability evaluation,
- playability testing,
- a CRM system, and
- release pilots.

4.3.3 Service and Community Complexity Management

In the previous subsection we learned that the developer–user social distance had increased from being very small at launch to being somewhat broader, but developers were in good touch with the user communities. Again, through additional interviews I found that the development situation in 2006–2007 was different from 2004. The following change themes emerged:

- increased complexity of the service,
- new ways of knowing about users, and
- changes in development rhythm.

In 2007, turnover was 43 million euros (still a negative net return, though), there were 9 million monthly users, and the company employed about 300 persons. The users came from communities in 32 countries, and Sulake had 14 local offices besides the headquarters. This made it impossible for one person, or even a group, to have detailed knowledge about what happened in all the hotels. Each local office had a good grip on the activities in its hotels, but the need for communication in-house was greater than before. The sampling problem was bigger, and making sense of what all the different user communities and subcommunities wanted was more difficult.

The service expanded to include more social networking features (article VI). Besides the friends list that had been there from the start, the user profile was changed: it was not only available when online, but every Habbo avatar got an automatic and customisable Habbo homepage. It was also possible to form Habbo groups, which meant a logo, a group homepage, and a discussion forum. In addition, users could 'tag' their avatars, which meant that users could attach a set of clickable one-word descriptors to their avatar. When a user clicked on a tag, the service generated a dynamic index of all the users and groups with that particular tag.

Due to complexity of the service and the diversity in use, evaluation became more difficult. Through my work with Sulake's user feedback methods in 2006, I realized that a simple question like 'is this newly developed feature good enough?' became more difficult to answer. Users would complain if there were lots of bugs in a new feature, but to get comparative data, challenges emerged: Which features

can meaningfully be compared with each other? How can one assess the meaningfulness of a particular feature for particular users and their use practices?[52] Such analysis seemed not possible with single surveys, but meaningful comparisons would require triangulation with other data sources and an analysis of a series of surveys and standardised questions in order not to get too overwhelming.

Sulake developed new ways of knowing about the users. The user and group homepages in combination with tags provided new mechanisms to see what is popular among users. Enabling discussion forums on Sulake's servers, instead of discussions taking place only on fansite discussion forums, made data mining easier for developers (subsection 4.4.4). Also, as described in article VI, an online user panel was developed. Sulake recruited 200 volunteers in one country to form an online panel. The online panel was given a weekly task consisting of a set of questions regarding design sketches and an opportunity to share opinions regarding the sketches in a forum. A global youth survey created a new segmenation of Habbo lifestyles: achievers, creatives, loners, rebels, and traditionals.

Through a pair interview with two usability and playability experts in Spring 2007, I learned that the usability processes had developed. After the first outsourced usability evaluation, Sulake established an in-house usability process through a pilot project. The focus of the succeedent evaluations was not the totality of the service, but they followed the game development, as new features and product extensions were developed. The reasonings for why usability was important were not only service quality, but that usability was part of contracts with other big, related organisations, and raised quality expectations from the market:

> *And as we are such a big player on the market now, we have to make sure that the product meets the standards set by others, and we want to lead our slot.*—Usability Expert

I also learned about nuances relevant to development: what was old code, what was new code, and what was hard-to-change code. Development considered high-priority features those that were used often—use influenced the prioritisation of features—or were directly critical to business: login, registration, and payment. When investigating which features had not been changed I found three categories: (1) low-priority features, e.g., Peelopaalu; (2) features that were difficult to implement due to lacking support in the underlying development framework (Flash), e.g., drag'n'drop; and (3) features that relied on external standards, frameworks, and processes, e.g., credit card payment processes.

To sum up, I learned about internal development rhythm:

- more frequent releases, from twice a year to four times a year;
- usability evaluations not a separate process, but followed feature development;
- a yearly interval between the market surveys;
- some continuous targeted interaction with users weekly:

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[52]Sofas can be compared to chairs, because you can sit on both. But a metal chair in Habbo can also be used *en masse*, creating an airplane setting. In order to assess the quality of a piece of Habbo furniture, detailed knowledge about its use is needed. Is it used as suggested by its designed form and function, or have users taken it into use in their own ways? Is it more or less critical to which use practices?

- weekly newsletter
- weekly assignments in online user panel;
- some features were unrelated to internal development rhythm.

Internal rhythm in an organisation becomes more important as the organisation grows and specialisation increases. When more people do different things, syncing between processes becomes more challenging and clearer rhythms need to be developed. Such rhythms are an underresearched subject in studies on user involvement. If there are discussions about rhythm, they are often connected to one project following the so-called software lifecycle and its stages, or rhythms related to agile development: development practices that take place daily, weekly, and monthly.

The findings here regarding development rhythm indicate that

- one cannot assume a typical development process or rhythm;
- there are more concurrent rhythms than one;
- development rhythm changes over time.

Timing user involvement is critical. Development rhythm needs to be included in studies assessing the use of user involvement methods.

4.3.4 Competition and Globalisation

When presenting my overview of the user involvement methods (Table 3 in article VI) in 2009 to Sulake's research coordinator, one reaction was that the article did a good job of describing the development of user involvement practices, but it did not describe the current situation very well. To get insight into the changed situation, I did a follow-up interview with the user insight manager in March 2010. It became evident that Sulake had implemented a new strategy to learn from users:

- user experience testing,
- data-based personas,
- more data mining of user activities, and
- automated surveys.

Following current research terminology, in 2008 Sulake talked about user experience testing in addition to usability or playability testing. While the usability testing had evolved from a more stand-alone practice into a tight integration with agile software development, Sulake conducted user experience evaluations with both new and old users, internally called 'live tests', in one country for every major release, about once a year.

As part of further developing user-centred design processes, during Spring 2009, Sulake applied the Persona method.[53] Six user archetypes had been constructed from data to represent the users. The idea was that developers have an updated reference to the goals and needs of Habbo users at hand, which could inform design solutions and evaluations.

In 2010 the user insight team employed four people. Besides the manager, who had been doing the research for more than five years, there was one person doing

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[53]Pruitt and Adlin, 2006.

data mining, another expert on quantitative methods, and a third on qualitative methods. Data mining and monetization of user data had become more important topics in the organisation. The process of learning from surveys had been significantly developed with the aid of automation. Based on certain triggers—for instance, awhile after becoming a Habbo user, or after a few months, or after not being active for a while—users got a survey to answer. There were about a hundred different surveys ongoing at any one moment.

The use of data mining and automated surveys had shifted the role of qualitative research and evaluations in person. Such methods were used more rarely and were more focused—for instance, when a pattern in the data from other sources could not be understood or when examining cross-cultural differences where a wide social distance between user researchers and users were assumed.

The six data-based personas figured actively in feature development, communicating user research results to service developers. In contrast to previous service lifecycle stages, the representation of user needs, motivations, and aspirations were more processed, but also less direct. Instead of checking out Habbo for oneself, developers could now rely on a set of continuously updated data-driven personas.

This again changed the rhythm of user involvement:

- surveys: continuous
- data mining: continuous
- personas: continuously updated based on the above two
- yearly user experience testing
- (bi)annual global youth surveys: 2006, 2008, Brand Update 2009, Global Habbo Hotel Fashion Survey 2010.

Table 4.7 below shows an overview of the user involvement methods used during different phases of Habbo service evolution. The position of a particular method in the table columns signifies the first use of that method. Some methods like avatar activities and sales statistics continue to be important in latter phases as well, since their introduction as an organisational practice. (More details in article VI.)

Table 4.7: First occurrences of user involvement methods by service evolution phase.

Concept	Beta	Expansion	Complexity	Competition
1999–2000	2001–2003	2004–2005	2006–2007	2008–2010
Avatar activities, Developers as users, Informal evaluations, E-mail feedback, Volunteers	Volunteer forum, Weekly newsletters and polls, Fansites, Official Fanzine, Summer meetings, Sales statistics, Customer service	Market survey, Focus groups, Usability evaluation, Playability testing, CRM system, Release pilots	Online user panel, Global youth survey, User and group homepages, Tags	Data mining, Automated surveys, User experience testing, Personas

4.3.5 Summary

The notion of the project has structured much user involvement advice. Different practices and methods are suggested early in the project, in the requirements phase, compared to other phases such as implementation, testing, and maintenance. The rationale was that in the beginning of a development project, the design scope is open and there is little knowledge about users. During the project, the design scope becomes more closed as ideas converge and developers learn more about users. In the end, the design scope is closed, new ideas must wait for the next project or change management during maintenance, and designers know a lot about users.

However, this notion of project and its phases structuring and giving rhythm to user involvement methods seems ill-suited to both Habbo and social media development in general. It seems more fit for software contractors that offer standard services, not software companies that own and operate a service. In this case study I found that

the notion of the project was not stable enough to allow for structuring and generalisation of user involvement advice.

This has to do with the transition of the development organisation from startup to small and medium-sized firm: varying degrees of organisational specialization, developer–user social distance, technical stability, project scope, and multiple changing development rhythms.

The variety in projects also relate to the dynamics of social media today: relatively low threshold for startups, fast changes in consumption and business environment (service competition, hardware, and software frameworks), and no standard size and scope for software business deals. This is unlike established software products for business, e.g., cars, airplanes, and ERPs,[54] where products and companies have a long history and more standardized business routines.

Following this finding about the instability of the project, I put forward the following arguments about rhythms and change in user involvement.

(1) The notion of project and project phases is not beneficial to structuring user involvement advice for social media, nor for generalisation across cases.

In my case study, projects were used to structure early development, but they were all very different from each other in terms of contribution to the service or needs for user involvement. Later, the concepts and practices around releases and sprints structured service development, but their character varied similarly very much.

Given the dynamics of social media today, it is unlikely that a stable notion of project will emerge for service operators in the near future in this domain. It did not happen in this case, and I doubt that it will happen in other cases. Perhaps with the exception of (1) companies with a considerable amount of resources (e.g., Amazon, Google, Facebook) that have the resources to shield development against external conditions, or (2) companies with hardware devices that provide a rhythm for their software development (e.g., Apple).

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[54]Campbell-Kelly, 2003.

(2) User categorisations are cumulative, emergent, and strategic: the criteria for successful categorisations change depending on changes in the development–use relationship.

In contrast to typical psychology-based approaches in HCI, the key criterion for Sulake's user categorisations has not been fixed over time nor set to understanding users and their practices per se, but rather has reflected how valid (useful, even inspirational) the information is for design and business concerns. The development went through the following overlapping business-sensitive phases:

1. Design for socialising, making Habbo a cool hangout online. As the developers were also users themselves, the informal engagement with the user community gave the developers a good enough implicit understanding of the users.

2. Design for use practices; when the developers realised that there are too many users to keep track of, they started thinking about what is common for all users: logging in, learning to navigate in Habbo, connecting with others, etc. (see the 'Habbo Ladder' in subsection 4.3.1).

3. Design for a changing target group and to account for an increased social distance between developers and users. As younger teenagers took over Habbo (and the developers grew older), the developers realised that an age gap of 10 years had emerged between developers and users. The developers were no longer insiders in the user culture, which meant that market and user research strived for an understanding what is cool and 'in' within the target group. Means for safe playing were implemented and the parent of the user became a key stakeholder in website communication.

4. Design for cost-efficiency and double-sided business. The target group of the first usability evaluation was new users and business critical service features. In 2004–2006 marketing needed to show advertisers that 'Habbo users are normal people, not freaks', so at one point the focus of the persona descriptions became lifestyles, not activity inside the hotel. This reflects the double-sided business model of Habbo—income from users is one part, income from ads is another. When economics started driving development more, focus changed to customer loyalty, acquisition, monetization, and retention.

5. Design for global competition and multi-sided business. In 2009, when the Personas method was implemented in a data-driven fashion, the focus became to ensure that the six persona descriptions should reflect the growing and declining market areas as well as have an even gender and age spread. In addition, they were created to serve service optimisation and new business models on monetisation of user data.

This is a contribution, compared to how lessons on user involvement are commonly communicated in HCI: user categorisations are used strategically and cumulatively. At first user practices and their (implicit) representations drove business, later user representations became means to implement business strategies. Understanding users and their everyday life as such was replaced with 'whatever works and helps the organisation to the next step'.

The strategy is emergent, but within boundary conditions. It has been adopted in response to unforeseeable changes in the target group and business environment. However, with hindsight, it is difficult to imagine social media business that would not have to deal with these development–use–business components of socialising, use practices, developer–user social distance, cost-efficiency, and global competition. Sulake–Habbo was influenced by these components in a particular sequence; other services might be influenced in a different order, but the components will be there.

(3) Instead of assumed conditions related to ideal project phases, advice regarding user involvement could be structured by the actual conditions in the development context.

The dimensions that made a difference to user involvement in this case study and are believed to have broader relevance regarding user involvement guidelines and advice were:

- Developer–user social distance,
- Organisational specialisation and internal rhythm,
- Degree of business/mission criticalness of a feature,
- Project scope: openness of design space and variance in use practices, and
- Relevance of existing knowledge about users.

In the following, each dimension will be outlined in more detail.

(3a) Developer–user social distance

In Habbo, the developer–user social distance started out small, but grew first through differences in age, professional background, and wealth (a consequence of there being more teenagers than professional new media people in Habbo), and then through differences in language, regional and national cultures, ethnicity, lifestyle, and so on (resulting from internationalisation).

If the developer–user social distance is small, developers' informal engagement and personal experience can substitute for more formal methods. It is likely that the developer–user social distance grows with a successful service. A broader developer–user social distance requires more effort (more formal research) from the developers' side to understand users and reduce uncertainty about variance in use practices.

(3b) Organisational specialisation and internal rhythm

When organisational specialisation increases, which tends to happen when organisations grow, more effort is needed on communicating knowledge about users and their use practices within the organisation, as not all managers and developers can have deep knowledge about users and use practices.

With more specialisation different concurrent rhythms in development emerge: community management practices can have one rhythm, market surveys another, and development a third, or even multiple rhythms if there are side-tracked parallel development with longer timeframes.

Doing user research two sprints ahead of development is one reported way of integrating user research with agile development,[55] but that is just one specific example of one outcome of a specific combination of internal rhythm with the other mentioned aspects, that is, 3a, 3b, 3c, 3d, and 3e.

(3c) Degree of business/mission criticalness

Login, registration, payment processes, and other factors enabling a low threshold of use are critical parts of most services. It is a big deal if they do not work optimally. Sulake focused its first formal usability evaluation on these processes. On the other hand, less important features can stand more bugs or longer fixing times. Sulake left low-priority features hanging for a while.

The degree of business criticalness of specific feature development in Habbo has varied between countries. Like with any transnational service, Habbo developers experience the dilemmas of language regions and differently sized markets. On the one hand, one could argue that, because of Habbo's Finnish origins, hotels with close linguistic ties to strong languages in Finland (Finnish, English, Swedish) would shape the service most. However, there are two factors counteracting this simple argument. First, language skills and effective communication among Sulake employees can mediate remote user needs. Second, since some user needs are readily communicated through sales statistics, the market size of a particular hotel country might be more significant than the language in that country.

(3d) Project scope: openness of design space and variance in use practices

User feedback and use practices have most influence on the features that are under active development. Early on emergent use practices and user feedback were significant, for instance, in the development of furniture ownership rights and their sharing, navigation between rooms, furniture trading mechanisms, moderation, and online discussion about Habbo. After the initial years, the Habbo service concept stabilised for a few years, where user feedback influenced incremental feature development. In 2006–2007 the service concept was broadened with social networking features and user feedback could influence those developments.

Habbo service development resembles city development: different city areas are open for development during different times and those who where not city founders have the impression that city centres were filled with houses a long time ago and are hard to change. In the same way, current users may feel that central Habbo features were defined and refined a long time ago, whereas the users involved with Habbo in 2000–2002 could have a different feeling of being pioneers in a broadening 'Wild West'.

Assessing relevant variance in use practices is significant for fitting a technical feature to social practices. This reflects in both in-built technical flexibility and in the selection of relevant user involvement methods. For instance, login, registration, and particular payment options are features with use practices that are tightly scripted with little degree of freedom. On the other hand, decorating a room and moving about in Habbo are very open-ended use practices. For open-ended use

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[55]Miller, 2005; Patton, 2008; Sy, 2007.

practices, technical flexibility is key and user research methods that can tackle open-endedness (observation, interviews, data mining server logs with machine learning algorithms). For tightly scripted use practices, clear interaction sequences are key, as are user research methods with a high degree of control and a priori definitions, like A/B testing and quasi experiments, for instance.

(3e) Relevance of existing knowledge about users

Sulake's current situation can be described as having a broad distance between developers and users, high degree of organisational specialisation, and many internal rhythms, but for many purposes the organisation already has the user knowledge it needs. This means that for some development sprints no new user research is needed, nor any questioning of the alignment of design goals and user needs, which are some standard assumptions of what user-centred design should do early in projects.

Prior method use history shapes consequential method use. For instance, as the service as a whole had been usability evaluated, the usability specialists at Sulake found no sense in repeating the same evaluation again. Usability evaluations turned towards smaller details of the service after the overall evaluation. The same finding was found in the market survey practices. After the first overall customer segmentation, the following surveys could fine-tune specific issues that remained open in the previous surveys. This practice can be interpreted as a sensible ongoing tailoring of methods that becomes necessary when dealing with as complex and changing phenomena as in this case.

For other purposes, use practices have changed or the Sulake's knowledge about users has become otherwise outdated. This means that for some development sprints, new research is needed in advance. For these reasons it is necessary to assess the relevance of existing knowledge about users.

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4.4 Pathways of User-Created Content and Contributions

While section 4.1 explored the emergence and co-constitution of Habbo, section 4.2 user categorisations, and section 4.3 change in user involvement practices, this section analyses what happened to user contributions. The fact that users are creative and contribute to social media is not news to anyone anymore, but what pathways do these user contributions take? Did they become features, shape community policies, or were they left as tweaks?

User-created content (section 2.5) stirred up a many debates when Blogger, Flickr, Youtube, Myspace, Digg, FeedBurner, Second Life, and similar services became societal phenomena. The service developers had not only created text-, photo-, video-, and audio-sharing systems, but also publication systems. What one user did in and contributed to the service became available to other users and contributed to their use experience.

The phenomenon of user-created content has become noted in many articles

and reports, e.g., OECD 2007, where various technical, social, economic, and legal drivers have been identified. While serving as a relevant starting point, many early analyses of user-created content risked being too superficial and shallow, e.g., people blog on Blogger, share photos on Flickr, share videos on Youtube, etc. Recent research has noted how the social interaction that takes place on these sites is much more multifaceted and nuanced than the cursory descriptions. People comment on the content shared by others, form groups, create and maintain social networks, get otherwise unavailable information, and act out commonplace rituals of everyday life.

However, even the research that opens up the nuances of user practices on these social media sites rarely takes a critical look at the developer–user boundary. Categories such as *developers* and *users* are often taken for granted, and there is not much research that looks into (1) what roles users play and the functions that they perform to make software work, and (2) how functions shift between developers and users (e.g., online moderation in Habbo started with user volunteers, but was taken over by employed moderators).

The following subsections develop a critical analysis of the developer–user boundary through a number of lenses. First, a content perspective is employed by focusing on the question of what content is created by whom in Habbo. Second, we take a look at the tweaking and subverting of Habbo by some users. Third, we analyse and structure developer reactions to these emergent use practices or user contributions. Finally, we analyse the fansites, their role in community management, and boundary shifts taking place between developers and users.

4.4.1 Content Creation Capacities

Section 4.2 gave an overview of different strategies to categorising Habbo users. Some strategies were based on demographics, some on engagement with the Habbo communites (operationalised as visit frequency and age in Habbo), and still others on the characteristics of the online activities. While pondering the idea of user-created content and what counts as content in Habbo, I created a figure to structure different user-created content. It seemed that temporality and visibility were two important characterising dimensions. Figure 4.8 shows different Habbo content on these two dimensions.

Starting in the lower-left corner, we find all the things one can do alone in a hotel room: move around, chat with oneself, interact with some of the furniture (e.g., throw dice, rotate a bottle, get a cup of coffee from the coffee machine, turn on the lights). These actions leave no permanent trail and nobody else in Habbo, except moderators, can relate to them without being present in that particular room. There are some actions that leave permanent trails in a room—for instance, decorating the room with furniture, rugs, floor patterns, and wall colours. These actions, including writing a Post-it note or putting a photo on the wall, are grouped in the box above the lower left corner on the level of *resource change*. In order to be able to do the above things, one needs to have both a Habbo avatar, a room in Habbo, and furniture. These more fundamentally transformative actions are grouped together in two boxes above the lower-left corner, on the level called *lasting change.*

Persistency   **User Created Content in Habbo**   dev

Persistency	me (developers' personal test env.)	friends (developers' shared versions before release)	all
"forever"	developers' personal test env.	developers' shared versions before release	create new - hotel - public room - guest room floor-plan - furniture - mini-game - ...any feature
lasting change	create a room, Habbo character, buy furniture	form a group invent a new game / event	sustain a room for events sustain a group with many rooms advertising campaign
resource change	change appearance decorate room write post-it note or put photo on the wall	friends only event trade furniture	arrange an event (beauty contest, game, party) play mini games (toplists)
temporary (no electronic trails)	alone in personal room: move around, chat monologue, play with interactive furni	chat in personal room send instant message	market event chat in popular guest room or public room
	me	friends	all → **Visibility**

Figure 4.8: Structuration of User-Created Content in Habbo.

While the above actions can be carried out in solitude, as soon as other Habbo avatars are involved, we move from the left towards the right on the visibility axis. The middle column, *friends*, indicates interaction and content creation in Habbo together with Habbo avatars, but with audience restriction: not everyone can participate, only Habbo friends or members in the same Habbo group. The list of friends, messaging with friends, and password-restricted rooms are central in making such content creation possible.

The righthand column, *all*, indicates actions that spread further by being visible to all Habbo users in one hotel. This requires toplist functionality or equivalent filtered and centralised communication. Everything in the hotel cannot be broadcast to everyone, but several mechanisms are built in to allow some actions to travel further than other. For instance, the personal rooms are showed in the navigator sorted by number of participants, so rooms with many Habbo avatars are showed first. Towards the top right-hand corner we note more lasting changes—for instance, if a room hosts a seemingly unending series of events, or when a group becomes long-lasting and enduring.

The top row in the figure, especially the top-right corner, indicates fundamental changes in the hotel that within the timespan of the hotel seem *'forever'*—for instance, launching a new hotel, a new public room meeting place, new floorplans for personal rooms, new furniture, new in-game levels, points, currencies, or other features. These are things that only paid Sulake developers can do via access to the back-end and development interfaces, which is why the top row has another background colour. Including this level of content shows that content created by developers and users can be analysed on the same dimensions; developer-created

content has more visibility and persistency.

The figure not only shows the content creation roles of developers and users, but can also be used to show what moderators do in Habbo. Moderators create the rules for what content can be allowed to become more visible and persistent. For instance, what kind of room names are allowed, what events can be marketed, what topics groups can and cannot be discussed and in what tone, and what character names and descriptions are not deemed suitable for the Habbo way. In this sense, the moderators and their policies sit on the lines between cells in this figure, allowing some content to sustain while filtering out other content.

Besides users, developers, and moderators there is a fourth common special role in social media: advertisers and campaigns created by them. Not everyone can create an advertising campaign and the service operator usually charges per views or clicks. Advertising campaigns are visible to all and usually last between a week or a month. These characteristics of advertising campaigns led me to put it in the box that intersects *all* and *lasting change.*

This figure is important because it challenges the clear-cut categories of users and developers, opens up nuances, and places them on a two-dimensional continuum. Not only are users and developers considered, but also moderators and advertisers become visible in this figure. The persistency and visibility dimensions of content are not particular to Habbo, but feature in all social media. For this reason, this figure is important to social media theoretisation and development practice.

Instead of starting from a specific definition of users, such as 'individual that interacts with the system' (ISO standard), this approach has avoided an a priori definition of stakeholders, but instead leaned on an approach that is grounded in empirical data. Such a methodology of leaning on content creation capacities is here suggested as good practice for social media research. This analysis also contributes to an expanding paradigm on content analysis in Internet research.[56]

4.4.2 Tweaking and Subverting

The previous subsection put users, developers, moderators, and advertisers 'on the same page', by studying their different content creation capacities. The figure can be used not only to map how content changes in visibility and in persistance, but also how the results of different users' actions and activities end up in different boxes.

Very early in our research on Habbo we (Johnson–Toiskallio) learned that Habbo users do not just hang around, meet other users, chat, play games made by Sulake, and decorate their virtual hotel rooms like their own room at home. In contrast, articles I and II showed that many users are much more creative. They

- bring in themes from child's play: collecting and trading furniture, play 'catch me if you can', orphanages (a place to find participants for pretend play in a mom–dad–child constellation), and other children's games;

- imitate adults, tv formats, and professions: casinos, pretend dating, Idols, The Bachelor, beauty contests, journalist, doctor, policeman, etc.;

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[56]Herring, 2010.

- play with the spatiality of the hotel: furni trap games, Habbo variants of musical chairs, Habbo Soccer, and other sport imitations and transformations
- form groups with missions in Habbo;
- connect rooms together with teleports to make a wide variety of room constellations; and
- find and use glitches in the hotel architecture.

In articles V and VII we (Johnson–Sihvonen and Johnson-Hyysalo-Tamminen) analysed in detail two examples of tweaking and subverting Habbo: gothic play and playacting horse girls.

In article V we (Johnson–Sihvonen) analyzed various forms of online gothic style in avatars, virtual objects, and places. Players of massively multiplayer online games usually use the available means to achieve the typical goth appearance of pale skin and dark clothes for their avatars. The reproduction and transformation of the gothic style is also rather common in Habbo, although it was initially designed to support benevolent and playful online behaviour.

Furthermore, we discovered that performing goth online is not just based on a visual style, as it is also a way of playing in Habbo. Being a goth in Habbo can mean different ways of being noticed and being alone together with like-minded players, as well as provoking the more mainstream players. Actively discouraging contact is one such norm-breaker, and another example is the gathering of 'off people' players in a room, where everyone sits silently in the chat.

We established that goths in Habbo play an interesting role in the development of the virtual world, as well as in the maintenance of it as a platform for social interaction. From the user's point of view, Habbo is a place where gothic users can find the company of other gothic users. The user-created gothic scenery—avatars and rooms in gothic style—provide a fun environment for the interaction. Gothic events, rituals, and groups structure the interaction and enable participation in something bigger than just a conversation. Talking about gothic topics can be fun or ironic for some gothic users, but it is also a way of dealing with personally touching and emotionally charged topics.

What Habbo goths have from the developers' point of view is a specific role in the innovation process. Goth users provide the kind of content for the virtual world that interests many teenagers and can be further utilized by the developer company. Some gothic users are consumers—they pay real money for virtual furniture—but there is more to it. For example, gothic users started out by using the 'Halloween' furniture line of candles, skulls, and bats for their own purposes. The developers noted the popularity of the 'Halloween' line, and in 2007, they incorporated parts of the gothic subculture into the core of Habbo. A gothic line of furniture emerged as a set of its own, which shows the impact of gothic users in the design and innovation processes. Without the content and feedback provided by gothic Habbos, the gothic line of furniture would probably not have been launched by the developers.

These two perspectives on goth subculture in Habbo make an interesting duality. On the one hand, Habbo goths have created a provocative anti-mainstream playing style; on the other hand, the developers have managed to turn it into a business benefit. This incorporation of subcultural activities has not meant the end of

playing goth, as early subculture theory by Hebdige suggests.[57] On the contrary, the gothic subculture is still vibrant. The gothic subculture in Habbo has survived commercialization, which is in line with recent research on the new relationships between gothic subculture and the mainstream.[58]

In article VII we (Johnson–Hyysalo–Tamminen) report of the story of two horse-interested girls in Habbo. They managed to turn the indoors setting of a hotel into virtual stables through skillful furniture decoration, coordination, and imagination.

Horse-riding activities (like any other, such as formula racing, found within Habbo) require a quasi-bounded digital space, or a setting that allows the play to be focused on commonly shared digital objects. The spatial infrastructure is arranged in particular ways to enable interpretative flexibility about already named objects provided by Sulake as basic components of the rooms–tables, chairs, decorations, and such. A new 'placeness' can be symbolized through their spatial rearrangement, the result of which is that any object residing within this social space becomes resymbolized. In horse rooms (e.g., 'stables' and 'riding grounds'), for example, the spatial rearrangement indicates that tables and chairs have become new social objects (e.g., stalls or hurdles) that are constitutive ingredients of virtual horse activities.

The riding activity itself is socially coordinated by assigning roles to the avatars within the rooms by their location or by active textual communication. Within rooms indicated as settings for equine activities, an avatar can become a 'horse owner' or a 'horse'. Horse ownership is claimed for an undefined period of time by asking the horse for its approval. The role of 'owner' is self-claimed. One can just start to perform linguistically most of the care work one would do on an organic horse outside Habbo—grooming and patting, shoeing, and harnessing the horse all happen by letting the others know that this is happening to the horse at the moment.

Becoming a horse, on the other hand, is indicated to others by standing within the bounds of the marked stable—a spatial bodily 'gesture' that has been turned into a sign of a particular role-taking initiative. The role of being a horse is further symbolically indicated by selecting a brown skin colour for the avatar and by typing the breed, temperament, and age of the role-played horse in the avatar's description (an identity indicator accessible to others through clicking on the avatar).

The role of 'being a horse' is often reinforced by making 'horse sounds' and communicating the feelings (via undecipherable utterings or descriptions of the sounds and feelings of the horse marked with an asterisk at the beginning and end of the description to separate it from normal conversation), but this kind of communication is not necessarily involved in the case of all 'horses'—central is that the interavatar communication is a noncommunicative act in its symbolic sense. The horse sounds and silence both act as noncommunicative markers in the intentionally framed human–horse conversation of gestures, or the staged nonsymbolic interaction that paradoxically occurs through symbols.

A horse has various ways of accepting a new owner, most often indicated by walking close to the avatar that asked for the permission and responding to the commands the avatar gives to the horse. Here the textual and the nontextual

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[57]Hebdige, 1979.

[58]Goodlad and Bibby, 2007.

communication intertwine seamlessly to perform a virtual trans-species agreement on the central relationship needed for 'riding'. Horse owners can then command the horses for riding sessions on dedicated riding grounds—these are usually other rooms connected to the main stables by teleports, allowing for a spatial bridge between them. The riding grounds are enacted by decorating the connected rooms as different kinds of terrain. As the avatars cannot really ride on each other, the riding activity itself in Habbo happens by walking the avatars side by side.

Like being gothic, the actualization of the virtual equine activities draws from not only the quasi-bounded digital space but also entire outside 'equine worlds'[59] consisting of interrelated activities and subworlds in horse breeding, riding, stable keeping, veterinary medicine, international horse shows, Olympic games, and wide publicity in newspapers and TV—mingled with smells of autumn forests and so forth. Just as importantly, the virtual horse subworld in Habbo draws from other virtual pet worlds (significant in popularity, such as www.neopets.com) and 'real-life' pet worlds, and hence comes into being as a mixed set of imaginative, communicative, and material resources.

Drawing from the equine world and children's playmaking practices, these teen girls have managed to alter (one could say subvert) the materialities of Habbo and effectively added a layer of imaginative existence to Habbo that never was designed into it. The virtuality of virtual worlds comes into being in multiple ways, some more digital, some relying more on imaginative add-ons to designed components (see Table 4.8 below).

Table 4.8: Actualisation of virtual activities requires a mix of both digital and imaginative resources.

Resource	Description
Computer and business infrastructure	Computer networks, service provider's server software and hardware, user software and hardware, payment mechanisms, business models, regulation
Material Habbo features	Add piece of furni, move and rotate it, change wall and floor colours, speech bubbles, avatars
Social worlds and practices that users bring with them	Children's playmaking, equine worlds, virtual pets, gothic subcultures including material arrangement, coordination, communication, and imagination

Both theses stories of goths and horse aficionados in Habbo are examples of how the Habbo bits and pixels get a new life in the hands of the users. These did not fit the content creation scheme in the previous subsection and were thus worthy of another subsection. The content creation scheme in the previous subsection took a fairly material standpoint and was based on signals of user action available to the technical system. However, imagination in action and styles of chat are aspects of user practices not available to the interactive system, thus they have persistence on a different scale, compared to content creation in subsection 4.4.1. The next subsection structures the different pathways that user tweaks can take in Habbo.

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[59]Becker, 1982.

4.4.3 Developer Reactions to User Contributions

Whereas the model of user-created content shows different kinds of content on the dimensions of persistance and visibility, it does not include anything about the dynamic relationships between different kinds of content. During my interviews with developers and users I came across a lot of examples where the users picked up an idea started by developers and turned it into something else. Sometimes it happened the other way around—users brought in something to Habbo that the developers had not considered, but that eventually became a feature or strongly shaped later feature development. I find this slowly paced dialogue between developers and users through the Habbo material very interesting to follow and worth an account.

Let us take the example of the bar desk. So far it has been established that one built-in developer–user relationship is that developers create furniture and floorplans and users make rooms from a floorplan and purchased furniture. However, the designed flexibility of a bar desk made it suitable to divide a room in to smaller parts, so users started making labyrinths. This was communicated through the discussion forums on the fansites and became noted through the room popularity mechanisms as labyrinth rooms became popular. Users also realised that creative use of two bar desks and a bar desk door can create a restricted area in one corner of a room. Then it was up to the room owner whom to allow through and perhaps to charge admission if the restricted area or the desired location accessible through teleports in the restricted area was interesting enough. The developers followed the user practices and noted the popularity of room dividers and made both more furniture with similar functions and new floorplans with pre-made sections, even one with an island in the middle. These were published in the furniture catalogue, to be purchased by users and taken into use in various ways. Figure 4.9 shows a schematic of this.

In a similar fashion to the bar desk, here are some examples of how users transformed Habbo:

- users turned the dice furniture into bingo halls and casinos, and used the dice as the necessary element of chance in some other Habbo games;

- whereas developers thought users would use the teleport to create virtual homes, with several interconnected rooms (kitchen, living room, bed room, etc.), users thought of connecting the teleports both in serial (multi-room mazes) and using many of them in the same room to create room hubs (travel agencies, teleporting centres);

- users took individual furni and created mass effects by applying many of them: many green rugs on the floor became outdoor grass; a flower and suitable wall colours completed the transformation of an indoor hotel room to an outdoorsy space;

- users agreed on that a certain avatar skin colour would mean a pretend play horse; horse movements and thinking communicated with an asterisk; and

- users imported professions into Habbo, creating roleplay around professions like (and rooms decorated in that theme) nurse/doctor and hospitals, policemen and police headquarters, teachers and schools, TV-hosts and studios, etc.
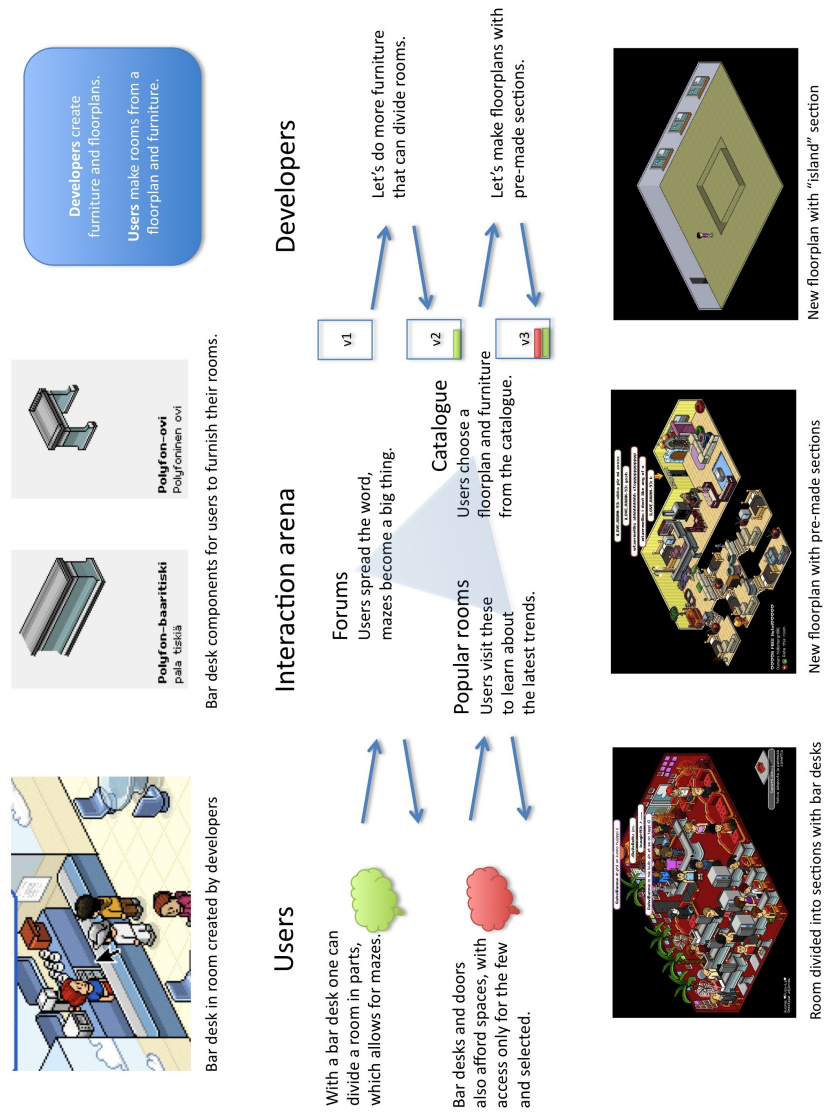
Figure 4.9: An example of pathways through an interaction arena in Habbo.

Based on my empirical data I found four different responses of the developers to these tweaks and creative developments by users. Some user practices

1. covered an area not previously considered and were readily incorporated into technology and became built-in features

    - Room Categories, Furniture Trading, User Groups, Fansites

2. shaped the design of already planned features

    - Habbo Pets, new furniture lines (e.g. gothic furniture, Asian furniture)

3. were (so far) left alone as tweaks

    - Habbo professions, user 'cooperatives', roleplaying as horses

4. were incorporated into policy and shaped community policies

    - hacking, netphishing, fansites

In some cases the user practices were completely transformed, and in other cases the user practices were only partially incorporated and live on as creative parallels. For instance, the developers considered virtual pets early on in the design of Habbo: "...already then we decided that there should be pets, we should have a moose that sits in front of the TV and drinks beer when left alone, and stuff like that..." (Interview 11 Apr 2005).

However, due to the decreasing age of the target user group, the pet feature was not implemented according to the initial vision. The pets became friendly cats and dogs, to be taken care of like tamagotchis. Similarly, a matchmaking feature, which was developed early on for an older target group, was also withdrawn at some point, and neither did the designs of new public rooms relate to pub life or drinking, like the first public rooms. On the other hand, the creative parallel to pets, role-playing as horses (article VII) lived on.

The fourth category, how user practices shaped community policies, is outlined in the next subsection.

4.4.4 Fansites in Community Management

Based on interviews in 2004 with the community director at Sulake, the head of all regional community managers, and the Finnish Habbo community manager in 2005, it became clear that fansites are an important part of community management as well. The community managers maintain close relations with the biggest fansite authors, and provide them information about coming features and changes in advance. At the time of the interviews, several of the largest Finnish fansite authors had visited the Sulake headquarters in Finland.

Not all Habbo website authors write positively about Habbo; some are fairly critical, some are just underground, and others share tips about hacking in Habbo. Also, scamming sites have emerged, where someone copies the layout of Sulake's website in order to trick users into inputing their usernames and passwords on a fake website. In addition to the community building effects that the fansites[60] have,

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[60]The emergence of Habbo- or Sulake-critical websites and the Habbo scamming websites puts question marks on the label 'fansite' for all of the Habbo themed sites created by Habbo users, as some of the authors of these websites are clearly not fans of Habbo or Sulake. However, for reasons of simplicity I call all non-professionally authored Habbo-themed websites fansites.

they also pose two risks to Sulake. First, from Sulake's perspective, some fansites disturb operations as they intentionally share information on how to hack Habbo or perform other Habbo stunts that are prohibited by the rules given by Sulake. Second, fansites like to use Habbo graphics, modify them, and post screenshots. This caused fears at Sulake that parts of the Habbo brand could enter the public domain at some point.

To manage these fansite risks, Sulake created the notion of official Habbo fansites and a policy for them. By agreeing to this Habbo Official Fansite policy, the fansite authors promised to follow the rules of Sulake in return for their established status in the Habbo communities. In 2009, there were 130 official fansites all over the world. The policy enabled easier counteractions against fansites that behave badly. For instance, in 2005, when rogue fansites were discovered, the normal procedure at Sulake was to send a formal letter to the Internet service provider of the fansite, threathening legal actions if the fansite content was not removed from the web hotel. At that time, rogue fansites were discovered by the rate of 200 a week.

By following the fansite phenomenon over a number of years, it is interesting to note that some of the functions that they perform in the Habbo communities have shifted between developers and active users. During the early years the core of Habbo, the virtual hotel, was more chat-based than today. The hotel featured a sychronous chat, but there was no place in the hotel for hotel visitors to have persistent discussions, share info about popular rooms, or record memories of events. Such features could only by served by asynchronous technologies, such as ordinary websites, discussion forums, so-called online guest books, picture galleries, gallup polls, and other voting mechanisms.

The first fansites in the Finnish community emerged a few weeks after the launch of Habbo, which at the time was called Hotel Kultakala in Finland. One of the first popular fan-authored sites was called www.hotellikultakala.com, made by a character named Depis, and featured interviews with Habbo visitors, visitor profile galleries, pictures, guest books, and top lists of hotel rooms and fansites. This site called itself 'unofficial Kultakala communitysite',[61] an implicit reference to the then official site: Kultakalan Kuvalehti,[62] which was produced by a team at Sulake.

Two major function shifts took place, one in April 2003 and another in late 2006 and early 2007. In early 2003 it became apparent for the then still relatively small headquarters (a few dozen people) that the online magazine production was too much work. In April 2003, the 21st and last issue of the official online fan magazine was published, while at the same time a weekly online newsletter was started. The last few issues of the fan magazine were co-produced by Sulake and authors from the Finnish fan community. A year later, as the first contest to become official fansites in Finland was held, a few of the fan authors, who had written texts in the official magazine, had started fansites of their own. Except for official information about the hotel that the newsletter provided, the other functions that the official

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[61]English translation of 'Epäviralliset Kultakala yhteisösivut'.

[62]Kultakalan kuvalehti can still be found in the Web Archive when searching for www.kultakalankuvalehti.com. Twenty-one issues were published between March 2001 and April 2003.

community site performed had shifted from developers to the user community.

This fan magazine and fan website reorganisation co-occurred with an increasing number of users, but with a decreasing average age. In the early summer of 2003 a guide written for parents of Habbo users emerged on the official Habbo website. These transformations signalled the end of a close developer engagement with the community. The tone of voice of the newsletter was different from the fan magazine; it was more written *for* the community, not *with* the community as it was previously. Inside Sulake, community management became more separated from game development.

In late 2006 and early 2007 Sulake launched community platform extensions to the virtual world. All Habbo characters got homepages in the community and features to support groups of users in Habbo were launched. Previously group membership was only a communication signal to others in Habbo through a one-line character description. The change enabled groups of users to share a group homepage and discussion forum. These changes brought a lot of the common fansite features in to the Sulake-operated platform—for instance, visitor profiles and discussion forums. This time functions shifted from the community to the developers.

The changes in the Sulake community platform to make it easier to discuss Habbo in Sulake's service changed the landscape for fansites. Instead of focusing on any kind of persistent discussion, fansites got to focus on more specific discussions and in particular, such discussions that could be too delicate to have on Sulake's Habbo site: for instance, the exchange values of rare furniture, discussions about the negative side of Habbo, detailed Habbo feature histories, and trading of Habbo furniture outside the Sulake-controlled Habbo market.

4.4.5 Summary

User-created content is also a resource for developers to learn about users, which was partially discussed under the heading of User Categorisation (subsection 4.2.6). The following gives more detail about the importance of user-created content to user involvement and wraps up my observations and arguments. Instead of taking categories such as developers and users for granted, this subsection critically analysed the developer–user boundaries in user-created content through a number of lenses: content creation capacity, with respect to developer intentions and reactions, as well as community management.

User-created content is not only about the publication of original works, their legal ramifications, and economic value, but it is also useful to user studies and ongoing service design. This is because user-created content is also about

- mediated communication with friends, colleagues, family, and strangers;
- carrying out everyday life mediated by computerised devices, network technologies, and social media;
- one (or many) particular development–use relationship(s) related to the social media service(s) in question; and
- consumer relations as an audience for advertisements and campaign participants.

*(1) In addition to established genre and content analyses of user-created content, the dimensions of **content visibility and content persistence** seem particularly promising.*

(1a) An analysis of the visibility and persistence of user-created content reveals variation among users and user-created content similar in genre and type, which can be used for user categorisation.

For instance distinctions between public and more underground chatters, or event participants versus playmakers that create the events for others to participate in (subsection 4.2.1).

(1b) Broadening the content perspective along the persistence dimension to include both more fleeting content, such as chat, and more longer lasting content, such as features that developers make, reveals a useful framework for understanding user-created content and relevant stakeholder groups.

This visibility/persistence content analysis framework allows for an analysis of **content creation capacity**, that is, a shared emergent attribute of social media stakeholders such as various user groups, developers, moderators, and advertisers. This perspective, grounded in content creation, helps put different social media stakeholders on 'the same page' in analyses and complements a priori definitions of these stakeholders. This contributes to an expanding paradigm on content analysis in Internet research.[63]

(2) The actualisation of virtual activities requires not only digital content created by users, but also things invisible to the computer system, such as the imaginative resources that users bring with them and draw on.

User-created content is not just about a developer-created platform where users can create content and make modifications, but rather users bring their own background, cultures, and personality to the system, without which the service could not work in practice. These new layers of virtual existence are important for both user studies and post-launch service design.

(3) Some cases of user-created content turn in to a fruitful co-creation and a slowly paced material dialogue through technology between users and developers, while other user contributions are left as tweaks, or shape community policies.

Some, but not all, user-created content becomes a design inspiration for service developers and is transformed into new features. This is important to the design process and the design outcome. Depending on the service lifecycle, the developers are more or less dependent on user-created content. If user-created content is to be actively supported, developers better leave hooks, openness, and flexibility for the users to chime in.

Likewise it seems a worthwhile pursuit for developers to follow what users do

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[63]Herring, 2010.

in the service, and what kind of material reactions come from the users. It is not obvious what user-created content and user practices will end up as new features or be left alone by the developers; there are different developer reactions and many potential pathways for user contributions.

(4) Even though user intermediaries, such as fansites, were crucial to Habbo's success early on, the functions they play in the user communities have shifted several times between developers and users over the years.

Important user community information was co-created first in the developer-edited fanzine, then on both official and unofficial fansites edited by users, and finally part of the service, as group homepages and discussions became possible within the Habbo service.

This story about fansites shows the importance of user intermediaries, especially when developer resources are low, but also the attempts by developers to incorporate crucial parts of the environment.

To identify, understand, and possibly support or benefit from these boundary shifts, categories such as developers and users cannot be taken as given, but rather must be understood as mutually constitutive and co-configured.

5

Conclusions

Broadly speaking, I argue that both research and practice of user involvement can benefit from a better understanding of design and use context dynamics, user categorisation, rhythms in development, and users' contributions after market launch. More precisely, the central conclusions of this study are the following:

1. **The unclear role of informal engagement and personal experience in changing design and use contexts can be resolved by considering shifts in *developer–user social distance*.** This concept is developed in this study and refers to the degree of uncertainty and familiarity between developers and users based on diversity, differences, participation, and indirect contact.

2. **User categories in design are not, and should not, be based solely on representiveness, since development organisations' user categorisations are *cumulative, emergent,* and *strategic*.** The adequate balance between strategy and representativeness changes over time in social media development and can be assessed by examining social media characteristics and developer–user social distance.

3. **User involvement guidelines should be uncoupled from the assumption of stable and orderly project phases.** Instead they should pay attention to neglected dimensions in the design context, such as multiple socio–technical rhythms, developer–user social distance, and the cumulation of knowledge about users.

4. **In assessing whether, when, and how to involve users in further service development after market launch, their *content creation capacity* becomes a prime issue.** Content persistence, visibility, tweaks, pathways, and user-operated services are among the key issues in analysing content creation capacity and user contributions.

The following two sections elaborates on these conclusions and summarises the main contributions and their implications.

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5.1 Summary of Contributions

This case study contributes to a better understanding of

- social media service evolution (section 4.1),
- how user categorisation could be developed in social media and beyond (section 4.2),
- rhythms and change in user involvement practices (section 4.3), and
- how creative use and other user contributions influence social media services (section 4.4).

Shifts in Developer–User Social Distance: Developer Subjectivity and Service Evolution

Developer subjectivity, for instance, a developer's own use of a particular product or service and resulting first-hand experience, is poorly considered in guidelines and other advice on user involvement.[1] Much writing on user involvement starts with the assumption that a developer is not a representative user and can therefore not trust his or her own gut feelings with respect to design choices. The other extreme opinion is also common, that is, developers are competent members of a community of practice and their personal experience is perfectly representative. In contrast, I argue that developers can lean on their ideas about use and experience of use, but that it depends on how familiar the developers are with the users and the use practices—what I call here the *developer–user social distance.*

The concept of developer–user social distance emerged from this case, as I had the opportunity to learn about a social media company's user involvement practices over several years and I became witness to a gradual, but significant, change in how users were involved in design. Early on the developers could draw upon their own experience as players and direct participation in the user communities, but, as the user base expanded internationally and extended to a younger demographic, they were forced to resort to more indirect forms of user involvement.

The change in the forms of user involvement became visible as I distinguished and compared a number of stages in the service evolution of Habbo (subsection 4.1.5):

<center>Table 5.1: Habbo Service Evolution, from subsection 4.1.5.</center>

Concept	Beta	Expansion	Complexity	Competition
1999–2000	2001–2003	2004–2005	2006–2007	2008–2010

The development company gradually adopted more and more advanced user research methods, and after 10 years claimed to be a company driven by user data. For instance, usability evaluations and market surveys entered development

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[1]Visible for instance in debates about 'heroic design', personas, the timing of field studies, and biases towards formal methods in certain user-centred design approaches (chapters 1 and 2).

practice about four years after market launch. The Personas method was adopted still four years later. Instead of speculating whether earlier adoption of established user involvement methods would have improved the service or made it worse— an unresearchable topic—I decided to investigate how it was possible that the company succeeded without the textbook methods and what instigated the change to adopt them anyway later on. The usual suspect would be 'more resources available because of organisational growth', but my research showed that this was only half the truth.

As outlined in section 4.1, the developer–user relationship changed significantly. With an increasing number of users, more features, and geographic expansion of the service, the diversity of use practices also increased. The younger demographic of the users brought increasing differences between developers and users. Developers' active participation in use communities decreased, and volunteer users' participation in development and moderation waned. The role of the fansites changed as certain discussions about Habbo could be carried out in the developer-provided forums.

I conceptualised the above changes in the development as changes in *social distance* between developers and users. As developed in subsection 4.1.6, shifts in developer–user social distance refers to changes in uncertainty and unfamiliarity of the other group's practices, resulting from a combination of changes in (1) diversity of use practices, (2) differences between developers and users, (3) direct developer participation in use practices and vice versa (direct user participation in development practices), and (4) indirect contact between developers and users through both social and technical mediators.

This case is an example of self-centred design being adequate, but within certain limits. To convey the limits, the sensitising concept of developer–user social distance is proposed. As long as the distance is small, one can posit that self-centred design and informal user engagement can work, but as soon as the developer–user social distance grows, more effort is needed in terms of user involvement to bridge the emerging gaps. It also works the other way around. In many product and service design cases, the initial developer–user social distance is broad; however, as users engage in development and personal contacts develop, the developer–user social distance decreases, which then opens up possibilities for the use of more informal, potentially lighter and more first-hand methods.[2]

While the context of use has been in focus since the beginnings of user-centred design (sections 2.1 and 2.2), the design context has been found between the lines and in the margins until recent debates.[3] The concept of developer–user social distance brings these two, design context and use context, together. It has the potential to overcome what has been described as a 'heroic view' of design, where developers are understood in too simplistic notions of either omnipotent heroes or

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[2]With regard to recent developments in the Habbo story, it is worth noting here that while these more informal methods contributed to the success of Habbo, the adoption of more formal methods have not corresponded to significantly greater success, as indicated by the ideas of usability maturity models. On the contrary, recent decline in monthly users and lapses in moderation casts a shadow over their adequacy, but as tens of other factors contribute to this development, it is difficult to estimate the effectiveness of more formal methods.

[3]Dourish, 2006; Svanæs and Gulliksen, 2008.

malevolent devils.[4] Applying the concept also might reduce the risk of believing that design inspiration must be located solely in the use context, which a narrow reading of various user-centred design guidelines might lead one to believe.

Already in 1991, Grudin highlighted various gaps between developers and users, but despite being well cited, the paper has not received much follow-up in terms of detailed empirical investigations and related conceptual development in HCI.[5] This thesis contributes to showing how these gaps come about and develop, even within the context of developing the same product or service. That is important to understand, as undertaken user-centred bridging activities influence the developer–user social distance, which then has a consequence for subsequent user involvement activities. Muller has suggested interpreting HCI as a third space, between developers and users.[6] This thesis contributes in putting the focus not only on the shared activities, but also on the different backgrounds from which developers and users come when they meet in third spaces.

User Categorisation Based on Developer–User Social Distance: Cumulative and Strategic

This research on user categorisation concerned both the nitty-gritty details for particular studies and the overall strategies for using specific user categories to direct design efforts. Sometimes developers discuss various user categories as their future target groups or audiences; other times different designations of users becomes a question of representing various established user groups in design. The point being that the user is always present in the design process, not in a physical sense, but in the sense that it is impossible to design anything without an idea of how the end result is going to be used (section 3.1).

In more traditional design contexts, where developers are far away from users, both geographically and socially, user categorisations (such as typical users, scenarios, personas, user stories, storyboards, and use cases) have an important role throughout the design process. The resulting user categories and representations of use convey the basic elements of the service or product to be (chapter 2). Compared to such contexts, this case study turns user categorisation and representation on its head.[7] Early on in the service lifecycle, when the developer–user social distance was small, there was little need for one set of user categories, as representative of the complete range of users and use practices, to drive the design. The service itself, easily accessible to and used by developers, represented users and their activities well. Online forums and web analytics complemented developers' own first-hand experience. It was not until later on in the service lifecycle, when the developer–user social distance was broader, that more strictly defined user categories became necessary as both a communication device for user knowledge and a strategic steering device in development.

It became evident that the development organisation's user categorisations were cumulative, emergent, and strategic. Focus changed from a 'cool hangout on-

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[4]Stewart and Williams, 2005.

[5]Grudin, 1991.

[6]Muller, 2003.

[7]The third research question: How does user categorisation change with social media?

line' and typical user practices, to catering to younger users and their parents, to cost-efficiency, multi-sided business, and global competition. Whereas early user practices and their (implicit) representations drove business, later the user representations became means to implement business strategies. In contrast to typical psychology-based approaches in HCI, the aim of Sulake's user categorisations was never to understand users and their practices per se, but the key criteria of the user categorisations varied with respect to changes in the development–use relationship.

As this study observed that Habbo development was shaped not just by users and their practices, but also by emerging business models and concerns (e.g., cost savings and revenue generation from user activities and business deals), also the user categories sometimes incorporated business- or design-specific issues. It is therefore suggested that user categories are not characterisations of individuals but rather portray certain characteristics of a development–use relationship. This finding is in line with some previous studies, both on developer–user relations[8] and categorisation in general,[9] but the consequences have largely been ignored by user research advice.

In light of the above, I argue that the social distance between developers and users significantly influences what counts as sensible user categories and user involvement methods. I also contribute a number of ways of how advice about categorising users could take advantage of the opportunities present in a social media design context (subsection 4.2.6), e.g., multiple sets of user categorisations, a combination of service 'census' data and samples, and categorisations of user groups and user development pathways.

The above arguments are analogous to one particular intellectual journey in the field of anthropology. Early on, the field started by exploring faraway people considered to be different; however, as the methodologies evolved, anthropologists came to understand that any exploration into 'other people' is also simultaneously an exploration into the anthropologist's self and background. The more anthropologists learned about 'the others', the more they also learned about themselves. Anthropological analyses have moved from 'objective characterisations' of a specific people, to relational accounts of the involved cultures. If we take this development seriously this would imply that anthropology in product and service development could have two parallel tracks, one on users and another on developers and their assumptions. This would enable a comparative study on developers and users, as well as on their social distance.[10]

Rhythms and Change Beyond One Project: Cumulative Understandings about Users

A dominant way of structuring guidelines and other advice on user involvement has been to assume project phases more or less tied to the software lifecycle, e.g. requirements analysis, implementation, testing, etc. (section 2.1). In contrast with

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[8]Hyysalo, 2009; Stewart and Hyysalo, 2008.

[9]Bowker and Star, 1999; Suchman, 1994a; Winner, 1980.

[10]Barab, Thomas, Dodge, Squire and Newell, 2004; Cooper, Hine, Rachel and Woolgar, 1995; Dourish, 2006; Nyce and Löwgren, 1995.

this literature, in this study I did not find the notion of project and project phases beneficial to structuring user involvement for social media or generalisation across cases.

When studying how the developers' user involvement practices evolved over several years,[11] it became apparent that project phases did not structure the use of user research and involvement methods. Because of the immaturity of the social media market, social media advantages to user feedback, as well as the relatively low cost of updating the software service, I found multiple overlapping developments and rhythms in the user involvement activities. Software releases, user research, user experience and usability evaluations were sometimes more synched and sometimes in different pace depending on what made sense in different situations. Similarly, different parts of the software infrastructure evolved at different rates. For instance, some features had a slow rate of change because of low business priority, difficulties in implementation, or reliance on external frameworks, e.g., credit card payment processes.

Prior method-use history shaped what was sensible consequential method use— e.g., after the main contours of Habbo had been usability evaluated, usability evaluations turned towards smaller details. Similarly, after overall user mappings, the following enquiries fine-tune specific issues that remained open. This practice can be interpreted as a sensible ongoing tailoring of methods that becomes necessary when dealing with complex and changing phenomena. The key question hence becomes how to enrich the knowledge in the organisation and how to meet the present and long-term key concerns in service development and the organisations doing it.

Given this evidence, I argue that guidelines and other advice on user involvement should be uncoupled from the assumption of stable and orderly project phases, both with regard to a notion of a project that always starts from scratch and the idea of a standard type of project that can be stabilized. In a design situation where the focus is on extending an existing service, it may be that no new user research or participation is needed, nor any questioning of the alignment of design goals and user needs—contrary to common assumptions in the communication of participatory and user-centred design principles. On the other hand, changing development contexts may render established knowledge about users obsolete. 'Text book' approaches to user involvement and engagement that lean on the notion of a single, stand-alone project have over-simplified product and service development.

User involvement should be structured by the actual conditions in the development context. Relevant actual conditions in this study were (subsection 4.3.5) developer–user social distance, organisational specialisation and internal rhythm, degree of business/mission criticalness, project scope, and relevance of existing knowledge about users. This can be compared with similar conditions proposed by Grudin as well as Svanæs and Gulliksen.[12]

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[11]The second research question: How do social media developers' user involvement practices evolve over time?

[12]Grudin, 1991; Svanæs and Gulliksen, 2008.

After Market Launch: Community Contributions and Developer–User Dialogue

The literature on user involvement is fairly silent about user contributions after market launch. In many cases only projected future use or limited use during evaluation is considered as influences to a product or service, not actual use (chapter 2). This study presents a number of new openings that develop user involvement into considering use after market launch. Another challenge is that even research that opens up the nuances of user practices in social media rarely takes a critical look at the developer–user boundary, and categories such as *developers* and *users* are often taken for granted. In contrast, this study looked beyond these given categories and studied the actual roles of different stakeholders in the ongoing development of a social media service.

Based on an extensive analysis of what users do in Habbo and how features change,[13] I observed two significant parallels between content created by users and features created by developers. Both user-created content as well as features could be analysed with respect to their persistence (fleeting or longer lasting) and visibility (to a smaller group or all users) in the service. By pursuing this analysis on these dimensions of persistence and visibility, here called *content creation capacity* (subsection 4.4.1), I found that it distinguished, not only between the activities of various different users and developers, but also between moderators and advertisers. Thus I argue that content creation capacity is a useful framework for understanding the role of user-created content in service development. This concept helps put different social media stakeholders—such as developers, moderators, users, and advertisers—on 'the same page' in analyses and complements a priori definitions of these stakeholders.

The extended timescale of this study allowed for an analysis of what I called a slowly paced dialogue between developers and users through the Habbo material. I examined how users tweaked and further developed practices around some features offered by the developers and conversely how developers picked up emerging user practices and implemented them as features in the hotel. Two particular cases of user creativity, the emergence of goth subculture and the creation of space for fantasy play by horse-interested girls, demonstrated how users tweak, subvert, and create new layers of virtual existence around a service. In addition, I tracked the pathways by which user activities fed in to further service development, noting that not all user-created content was incorporated in features but that some contributions were left as tweaks or shaped community management policies. These analyses of features and exchanges also contribute to an expanding paradigm on content analysis in Internet research.[14]

The relationship between the company and its user communities was also subject to continued experimentation and reform. I outlined the roles a variety of users played and the functions that they performed to make the service work, as well as how functions (e.g., moderation and support) shifted between developers and users (sections 4.1, 4.4, Appendix 5.2). Early on, active user volunteers helped

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[13]The first research question: How do users' actions in and around a social media service shape its design after market launch?

[14]Herring, 2010.

out in areas where the service developer company had no resources, but later moderation and discussion were brought in-house and in part automated in an attempt to reduce uncertainties. Key questions to the organisation of user possibilities in influencing service evolution include who hosts, maintains, and controls the rights to activities and outcomes of user-run, developer-run, or interconnected third-party blog/forum resources and services.

A fruitful example from this case that addresses the scalability of participation in social media is the form of developer-user collaboration conceptualised as *community journalism* (sections 4.1.6, 4.2.2, 4.2.5). The developers encourage users to report and write articles about important topics in Habbo. Instead of the developers having to find out what matters most to the users through expensive user research, developers can rely on users doing the work. The role of qualitative and quantitative inquiry is then transformed into a means for source critique of what the users write.

<div align="center">• • •</div>

5.2 Implications

Are we witnessing the funeral of user-centred design, as some researchers suggest?[15] The argument has been that user-centred design stems from a time when the world was much different compared to the one we live in now and that the practice has not kept up with the pace of time. If one understands user-centred design as up-front user research, mainly interviews and observations, then it is easy to dismiss it. However, if one takes the approach suggested in the ISO 9241–210 standard,[16] and makes a few modifications, user-centred design seems plausible in the context of social media. The modifications needed would be to (1) update the notion of social environment to mean community activities instead of job function and work practices, (2) note that community responsibilities can determine user goals and tasks in the same way job responsibilities can, (3) add that the principles also apply to re-development and actual use after market launch, and (4) take heed of the discussion on developer–user social distance, e.g., make explicit the special case of how sufficient user involvement can differ when developers also use the service themselves.

Perhaps the broadest alternations needed to the standards and other user involvement advice concerns the recommendations for involving users. The characteristics of social media provide a number of direct and indirect ways of involving users (digital trails and feedback mechanisms) not previously considered in the

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[15]Norman, 2006; Norman, 2005; Zimmerman, 2011.

[16]The ISO 9241–210 suggests six principles and four design activities. Principles: (1) the design is based upon an explicit understanding of users, tasks, and environments; (2) users are involved throughout design and development; (3) the design is driven and refined by user-centred evaluation; (4) the process is iterative; (5) the design addresses the whole user experience; (6) the design team includes multidisciplinary skills and perspectives. Design activities: (1) understanding and specifying the context of use; (2) specifying the user requirements; (3) producing design solutions; (4) evaluating the design. ISO, 2010.

ISO standards.[17][18] These new ways of involving users also highlight a number of contingency factors not covered by the ISO standards.[19] This case study questions the validity of lifecycle stage as a relevant factor and confirms the following contingency factors (of which the ones marked with an asterisk are mentioned in the ISO standard):

- degree of specialisation in development organisation[20]
- degree of business/mission criticalness of the feature in question (*)
- variance in use practices (* wide task spectrum)
- degree of regular use[21] among developers
- developer–user social distance
- degree of blind corners[22] in the service
- degree of relevant cultural maturation[23]
- degree and variety of users' digital trails that developers can access
- degree of the user community primary activities that are covered by the service[24]
- degree of integration with other services in the social media ecosystem
- degree of relevance of existing knowledge about users.

Basically what this implies to managers is that 'being in the beginning of a project' loses its inherent meaning in relation to user involvement strategy. Instead of assuming that 'the early stages' of a project means little knowledge about users and a wide-open design scope, for instance, managers could consider the above contingency factors and use the relevant ones to decide on the next steps for user involvement. The same goes for 'later stages' in the project, which is commonly a shorthand for assumptions regarding plenty of user knowledge, closed design

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[17]The ISO standard on usability methods supporting human-centred design, ISO 16982, covers the following methods for *direct* involvement: observation of users, performance measurements, critical incident analysis, questionnaires, interviews, thinking aloud, collaborative design and evaluation, and creativity methods. ISO, 2002.

[18]The ISO standard on usability methods supporting human-centred design, ISO 16982, covers the following methods for *indirect* involvement: document-based methods, model-based approaches, expert evaluation, and automated evaluation. ISO, 2002.

[19]According to the ISO standard on usability methods supporting human-centred design, ISO 16982, the factors affecting the choice of usability methods are lifecycle stage, characteristics of the users, characteristics of the task to be performed, the product or system itself, the constraints that affect the project, and the degree of expertise in ergonomics available in the development or evaluation team. ISO, 2002.

[20]It is not about organisational growth, but the way how the organisation is organised, e.g., functional departmentalisation vs. cross-functional and holographic teams.

[21]Use can be actual or imagined, depending on whether the service is launched or not.

[22]When an increase in the number of users coincides with an increase of variance in use practices, the developer means to learn about users (visits, community discussion, statistics, and other activity aggregation mechanisms, etc.) can only cover parts of the actual use, which results in increased uncertainty of actual use practices, that is, more blind corners in the service.

[23]In the Habbo case the developers leaned on user interface genres from the 1980s, especially video games like Commodore 64 and similar console gaming platforms, and gameplay patterns from those days. Habbo developers drew other aspects from multiplayer online games in the late 1990s, both in copying and avoiding such gameplay design patterns.

[24]Compare for instance Habbo with Flickr, where part of the activity is outside the service (photo taking) and part is computer-mediated (sharing, organising, voting, searching, etc.).

scope, and a fairly complete prototype. In the case of re-design projects there is always plenty of user knowledge in the organisation and a working product or service to evaluate in all project stages—it is not mandatory to wait until after development.

These results imply that the same gentle critique towards usability evaluations that Greenberg and Buxton provided (subsection 2.2.1) could be extended towards usability maturity and process guidance in the ISO standard on human-centred lifecycle process descriptions (subsection 2.2.3). While they have a 'significant role to play when conditions warrant it', naive application can be 'ineffective and even harmful'.[25] Some of the time it is not safe to start with a field study or user categorisation. This is not against what the usability maturity standard states, because a key process area is not equivalent to an actual process and the standard leaves ample room for selecting what to evaluate,[26] but its current format and spirit easily lends itself to misunderstanding. Furthermore, one cannot assume that documented evidence of usability evaluation always trumps informal engagement: in the case of low developer–user social distance, it is precisely the opposite way around.

The hope is that user-centred design can be enriched by making what is tacit more explicit, especially regarding the developer–user social distance. If one understands user-centred design to imply upfront user research in all projects, that understanding ignores the experience of the developer, which is more relevant the smaller the social distance between developers and users. The point in user-centred design is to define requirements from the users' perspectives, which is easy if the developer is close to the user but much more difficult if there are several degrees of separation between the developer and the user. This is one way of stating that the designer-self is relevant and good design is designed from somewhere, not nowhere.[27]

Svanæs and Gulliksen developed a similar list[28] recently with aspects of the design context as risks to usability.[29] This work on tactical user-centred design highlights the importance of the design context, in addition to the mentioned well-known use context analysis. With respect to tactical usability, this case study emphasises that we need an analysis of the *relationship between the use and design context*, for instance, with respect to developer–user social distance and accumulation of user knowledge.

A key theme for future research would be to engage in understanding the social distance between developers and users and its consequences to design choices, with regards to design space thinking, product flexibility, and user involvement. We need to know what heuristics seasoned designers use when they make design choices and how developer–user social distance, with associated uncertainty about user practices, influences those design choices. An important question would be

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[25] Greenberg and Buxton, 2008, p. 1.

[26] Glazer, Dalton, Anderson, Konrad and Shrum, 2008.

[27] Suchman, 2002.

[28] The organisations involved, their relations, and agendas; internal factors in the developer organisations; software development methodology and tools; maturity levels; internal factors in the client organisations; customer–developer legal relationships (e.g., contracts, tender); handover issues; organisational stability; lifecycle perspective; conflicting requirement.

[29] Svanæs and Gulliksen, 2008.

what are appropriate measures for the social distance between developers and users, but that will require investigations of the size of a research program.

By no means does this case live up to the participation criteria of participatory design (subsection 2.3.2), but the research field can still learn from this case. The forms of user participation (Table 4.7) encountered are very broad, compared to what method guides contain—especially with regard to indirect involvement, where users' actions shaped the design as a side effect, for instance, regarding online community journalism and statistics of furniture sales and user-to-user transactions.

This case also reveals how user involvement is different in social media design contexts. Involving users in more traditional contexts has been a much more explicit effort, as developers and researchers have had to go where the users are and ask permission to observe and get feedback. While some ways of involving social media users remain as indirect as before, feedback from social media users is at the same time genuinely direct. What people do in the service leaves digital trails accessible to developers, which can be interpreted as user feedback. Users might not think that they are being involved or formally invited—they will just not return if the service does not meet their needs. However, previously it took longer before a decision by a user to stop using a product or service reached the developers.

The findings and conclusions about the strategic and cumulative character of user categorisations also have implications for the first steps in user-centred and participatory design projects and later user research in social media design contexts. Utmost care is needed as regards to embarking on user groups definition 'expeditions'. First, if there is a low social distance between developers and users, there might not be a great need for well representative user categories, especially if the social media service in question already represents the user practices well. Second, a large number of users and broad diversity in use practices makes sampling and analysis much more difficult compared to other software design contexts. Partial and strategic user categories might be all that is needed, as well as a critical reflection on what to categorise: it need not be individual users at all. Considering a situation after market launch, the opportunities present in a social media design context are manifold, but need to be applied wisely.

Feedback from social media users, in terms of frequent data points of user actions, has a major consequence for user studies. The techniques commonly denoted as evaluation 'with' and 'without' users need to be supplemented with 'evaluation with database access to users'. As both use and non-use is logged in the server database, alarms can be set to trigger if use practices change. These alarm triggers can then be used as starting points for subsequent user studies to explain the changes in use practices. However strange, or perhaps disciplinary inconvenient, it may sound, the experience from this case study suggests that acquisition and analysis of database logs should take place before embarking on either quantitative or qualitative studies on social media use after market launch.

In broader discussions on participatory democracy, the market has been criticised as not being a fair indicator of citizen opinions, needs, and aspirations. The same applies to Habbo, since not all users can afford to purchase furniture from Sulake. However, since so much of the core community activity is computer-mediated

and loggable by Sulake, including the second-hand furniture market, the uncertainty of what the not-so-much-purchasing users want is markedly decreased. This is of broader importance, not only to similar social media services, but also to other future products and services, as more and more of society is digitalised. Emergent questions are what data from ordinary users' everyday actions are logged, under which circumstances, and to the benefit of whom. The risk is that developers use web analytics in not-so-transparent ways, leading to a situation where only developers gets to decide on web analytics and users do not know exactly what is analysed, which increases the power asymmetry between developers and users and further complicates participatory design.

Concerning methods of participation, this case sheds light on the dilemmas of a service developer that co-constructs a service that is used by millions of people. It explored the developers' user categorisation processes, and the strategies that emerged to solve the problem of abstracting relevant user knowledge from the everyday life of individuals in their social contexts. These strategies are very much like localisation and generification processes identified previously,[30] but use contexts as the *local* and software as the *generic* is too simple, as in the Habbo case there were many local–generic processes taking place at any one moment, e.g., service topology and language localisation, feature categories, and abstractions of users with respect to countries, lifestyles, and consumption practices. A task for future research is to compare localisation and generification processes across cases and application domains.

Parallel research by Holzapfel[31] gives further weight to some of the findings in this thesis, especially as regards to popular social media services tending to start out with developers who develop for themselves and their friends.[32] He also suggests that the characteristics of social media offset the need for user research and discourages early prototyping. This study is more rigid with respect to the boundary conditions for these assertions and provides conflicting evidence on prototyping. On the one hand, certain features in Habbo were redesigned over the years, because it was possible due to the low cost of redesign and distribution, and also because it was needed as the complexity of the service grew. On the other hand, Habbo was based on two prototypes, Mobiles Disco and Lumisota. One apparent reason for relaunching the service was that the primary activity and service scope changed between the services: Mobiles Disco was a disco, Lumisota was a snowball game; whereas Hotelli Kultakala (which became Habbo Hotel) was a hotel. Concerning easy redesign, I learned that there was code that was hard to change and code that was more easily changed (subsection 4.3.3). Moreover, starting in 2006 Sulake also organised online user panels, whose task it was to evaluate design sketches and discuss them in an online forum, a typical example of prototyping with users.

The evidence from the Habbo case suggests that the relationships between prototyping and social media is not clear-cut at all. In particular, hypothesis formulation on this topic needs to be specific about whether one discusses (1) interactive prototypes vs. design sketches, (2) hard-to-change fundamental features vs. easily

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[30] Pollock, Williams and D'Adderio, 2007.

[31] Holzapfel, 2008.

[32] Also debated in a blog: Porter, n.d.

redesigned features, (3) whole service changes vs. A/B testing, (4) designer-created content vs. aggregated content based on the actions of thousands of users, and (5) tightly scripted vs. open-ended features. Based on the pathways of the Habbo service, it made sense to prototype in different design circumstances outlined above.

Considering research on user innovations, this study contributes to approaches that emphasize intermediaries and feedback loops between developers and users.[33] In line with previous research, this case also highlights a broad variety of intermediate actors between 'regular' developers and users who play significant roles, be they volunteer community moderators, fansite authors, NGOs, hackers, mobile phone operators, consumer ombudsmen, and so on.[34] Like Stewart and Hyysalo— who broaden the functions of intermediaries to encompass the roles of facilitating, configuring and brokering—this study points to the various roles a variety of different users can take, but in the context of social media.[35]

While some studies on companies that rely on user communities for innovation point out the role of company-controlled user toolkits,[36] this case demonstrated how user activity feeds into further service development without such user toolkits. Instead the solution space was partly open to users due to built-in technical flexibility and open-ended use in the service, as well as user contributions with standard image manipulation tools.

Recent research on user innovations has opened up a new research front on a so far neglected side of user innovation, so-called user techniques, or practices that users develop to overcome restrictions with existing technologies.[37] The fact that users' actions, both in line with developer expectations and to the surprise of developers, shape products and services has been long known,[38] but this has remained regretfully marginal knowledge. This case contributes to the understanding of what happens to the user contributions once they are communicated by a number of examples, and suggests different pathways. Future research includes finding out what kinds of pathways emerge in different domains, including an analysis of success factors and barriers for the user contributions to turn into user innovations.

Whereas this case included more detail on the strategies of the developers to learn about the users, future work could deepen the analysis of the strategies and impact of the users who intentionally wanted to make an impact on the service. This case study discussed, for instance, direct feedback, community journalism, collaborative actions in the hotel, hacking, and tweaking as example means to make an impact.

The findings from this social media case gain importance if two technical tendencies accumulate. The first is the increasing incorporation of functionality for group communication in software products and services in general. The second

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[33]Pollock and Williams, 2009; Stewart and Hyysalo, 2008; Van de Ven, Polley, Garud and Venkataraman, 1999; Williams, Stewart and Slack, 2005.

[34]Bessant and Rush, 1995; Howells, 2006.

[35]Stewart and Hyysalo, 2008.

[36]Hippel, 2001; Jeppesen and Molin, 2003.

[37]Stockstrom, Lüthje and Antorini, 2010, point to the example of how Jan Boklöv developed ski jumping by inventing the V-style in 1986, and report that similar user innovations take place within the LEGO field.

[38]Hyysalo, 2010; Pollock and Williams, 2009.

is that developers of other products and services make use of cameras and other sensors. Both of these tendencies provide developers with additional digital trails of user activities and increase, not only the means for feedback and control, but also the demands for accountability and transparency.

Appendix A: Stakeholder Analysis

One challenge for stakeholder analysis, as part of product development and research involving users, is to find and develop analytical frames with suitable levels of granularity. The ISO standards provide a framework called the context-of-use model,[39] but important issues are left out and it has not been developed for technologies outside the work context. The framework used here comes from the work of Adele Clarke. It builds on a collection of existing models of social analysis developed by Strauss in the 1970s called Grounded Theory.[40] This analytical frame, slightly tuned compared to Clarke's version, includes the following actors:

Table 5.2: Analytical Frame Developed in the Prima Project.

actor	explanation
stakeholders of interest	individual, collective, implicated/silent
social relations and power structures	who is able to interact with whom and in which ways?
discourse formations	how do different stakeholders frame the use of specific applications?
norms, regulations, and rules	which behavioral scripts do different stakeholders suggest?
history, traditions, persistence	how has the application in question evolved, what traditions have emerged, and which information is kept and why?
interactional enablers	how is interaction made possible and what kind of information is hereby suggested?
communicational forms	how do stakeholders interact with each other?
business models	how is continuous work compensated?
non-human actants	what technologies are used to maintain and develop the service, and what technologies are necessary in order to be able to participate in the specific interaction?

[39]ISO, 1998; ISO, 1999; Maguire, 2001a.

[40]Clarke, 2005; Strauss and Corbin, 1990.

Habbo Case Summary (April 2007)

This summary was created by the author, applying the analytical frame developed in the Privacy-in-the-Making (Prima) project, of which the author was part of 2006–2010.[41] www.sics.se/projects/prima

Individuals

- Current Habbo users[42]
  - about 9 million globally, spread out mostly in industrialized (with either a good coverage of broadband access or lots of people) countries as follows: 25% Europe, 25% Asia and Australia, 25% US, 25% Mexico and South America.
  - 75% of the users are between 13–18 years old. Finland has more younger users, Japan older users.
  - On average, the users spend 30 minutes online per day.
  - In Habbo: Habbo staff, Habbo-guides,VIP guests, youth workers
- Previous Habbo users not active any more
  - visible in the traces that they left in Habbo: inactive Habbo avatars (taken Habbo nicknames), empty rooms, Post-it notes
  - less visible, but still there: the ways in which they influenced Habbo development and features and playing culture
- Habbo users' parents
  - often the paying customer
  - children negotiate access with parents
- Habbo founders: Sampo Karjalainen and Aapo Kyrölä
  - other particular Sulake employees
- Consumer ombudsman (e.g., of Finland)

Collectives

- Sulake
  - the company and the brand
  - the original developers (a handful, of which some work on other stuff)
  - game development: a team of 15–20, consisting of user interface programmers, server programmers, and graphic designers
  - marketing and user insight
  - country-specific operations (moderators, hotel managers), customer services
  - business

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[41] Bylund, Johnson, Lehmuskallio, Seipel and Tamminen, 2010.

[42] It is a practical impossibility to enumerate millions of individual Habbo users, so I resorted to a few aggregate descriptions here.

- – sales
- Sulake owners
- Sulake's competitors
  - – Stardoll, Neopets, Club Penguin, Piczo, Miniclip, imvu, gaia Online. . .
  - – MySpace, Bebo, IRC-Galleria, Windows Live Messenger, Facebook, The Lounge, YouTube
- Sulake business alliances
  - – Sulake has more than 150 payment mechanisms globally
  - – payment: mobile phone operators, youth card companies, credit card companies, banks, and Internet payment systems
  - – distribution of prepaid cards (in Finland: R-Kioski, Tiimari. . .)
  - – advertisers
- Other alliances
  - – Unicef
  - – EOPH and Hubu—Elämä on parasta huumetta ry
  - – Netari—Helsingin nuorisoasiainkeskus
- Organised groups in Habbo (cf. guilds)
  - – volunteer guides
  - – groups formed around a fansite, e.g., authoring it or participating in forums
  - – groups formed around a (popular) room, or set of rooms
  - – groups as in 'Habbo groups' (since 2007), e.g., http://www.habbo.co.uk/community

Implicated (Silent) Stakeholders

- Other computer users in the same household
  - – in Johnson's survey (2004), 93% of the respondents reported that they log on from home
  - – siblings and parents often share one home computer and one Internet connection
- Significant others
- Friends, school classmates, mates from hobbies
  - – some participate in Habbo, some do not
- Celebrities in national and pop culture: e.g.,
  - – in Finland's Habbo there is a famous Habbo avatar named Vanhanen, after the Finnish prime minister Matti Vanhanen
  - – in Finland there is a purchasable wall poster of the former president Kekkonen
  - – there used to be a wall poster of the British queen

Discursive Constructions and Formations

How do different stakeholders frame the use of specific applications?

- it's a *hotel*—hotel manager, hotel staff, hotel visitors
- it's a *game*—socialisers, explorers, achievers, killers[43]
- it's *child's play*—children with imagination and creativity, older people
- it's a *chat*—chatters do nothing serious, they just chat and don't want to win or play the game seriously
- it's a *community*—people come there to meet others with similar interests; one can fulfill oneself as a community member; one starts as a newbie, continues to become a regular well-behaving member; and some very active become appreciated gurus
- it's a *dating place*—teenagers come there to meet potential girlfriends and boyfriends, to practice online with a different 'face'; there is less need to manage school reputation
- it's a *place for collecting and trading* furniture:—similar to other collecting hobbies, such as football player cards, baseball player cards, musicians cards, Magic the Gathering, etc.
- it's a *place where one can make up one's own game*—game makers and players (imitating TV-shows, sports, dice-based games)
- it's a *place where one can hangout*—meet friends, get to know other users
- it's a *time-shared place*—new mothers and other minority groups become visible during daytime, when the majority of the users are at school; older teenagers later in the evening.
- there are *threats* to the game/community/hotel—hackers, script kiddies, scammers . . . grief players
- it's *cool graphics online*—well-designed (thoroughly thought out pixels) and enduring (8 years already)
- it's *part of the new media scene*—early on new media people used to hangout in Habbo
- it's *new technology*
- it's *a new ICQ*—the original developers wanted to make a cool new graphical ICQ
- it's *business*—a success story, employer-employee negotiations (HS, Taloussanomat)
- it's *where the money comes from*—employee, manager, boss, investor
- it's *the future*—future users
- it's *a service that entices children to consume* (HS/TS)
- it's a *crime scene*—some have stolen Habbo furniture and been sentenced for stealing virtual goods (Wikipedia)

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[43]Bartle, 1997.

- it's a *place for youth work* (HS 22.6.2009)
- it's a *means for online security education* (Taloussanomat 8.2.2007)
- it's a *means for advertising* (HS 29.8.2005)
- it's a *pop culture arena* (Taloussanomat 15.1.2009)

Non-human Actants–Technologies

What technologies are used to maintain and develop the service, and what technologies are necessary in order to be able to participate in the specific interaction?

- users
    - computer hardware, keyboard, monitor, mouse, network card/modem
    - router, Internet connection, Internet service provider, at least 256kbps (guess), phone lines or other (wireless or cable) signal distribution network
    - electricity, distribution network, standard AC (e.g. 220V 50Hz)
    - operating system, Internet browser, Shockwave plugin
- developers (Sulake)
    - Macromedia Director, Lingo, Java server, Fuse
    - IDE (integrated development environment), version control, and code management
    - office software
    - test-server
- live site operators (country-specific operations)
    - effective servers, lots of bandwidth

Revenue Streams

How is continuous work compensated?

- Habbo credits
    - in-game currency
    - users buy Habbo credits from Sulake that can be exchanged into Habbo furniture
- Habbo Club
    - monthly fee in exchange for more
- Advertisements
    - companies pay Sulake to display ads in public rooms in Habbo
    - ads can be displayed 'between rooms', when loading a room
    - ads can be displayed on Habbo's website
- Customising Habbo's Game Engine
    - Walt Disney Magic Kingdom, Coke Music/Studios/MyCoke (Coca-Cola)

- Hollywood Deals

  Habbo, the largest online virtual world for teens, today with Paramount Pictures Digital Entertainment, announced a licensing agreement to create virtual goods based on titles including 'The Spiderwick Chronicles,' 'Beowulf' and 'Mean Girls.' The deal will provide Habbo merchandising rights throughout the U.S. and Canada for all three properties. The partnership marks one of the first of its kind between a major motion picture studio and a virtual world commodity. http://www.sulake.com/press/releases/2008-01-29-Virtual_goods_get_a_Hollywood_makeover.html

- Venture capital

Social Relations and Power Structures

Who is able to interact with whom and in which ways?

- different power in relation to the technology

  - developers—can change Habbo architecture
  - project managers, art directors, and IT architects have more power than graphic designers, user interface programmers, server programmers
  - product board (representatives from business, sales, marketing, and development) decides roadmap
  - hotel manager—can create hotel events, competitions
  - moderators—can kick out disturbing users
  - users—can be in Habbo, decorate rooms
  - VIP guests—popular culture icons visit Habbo for 2 hours to chat with their fans
  - netari youth workers
  - EOPH drug info bus

- different power in relation to room

  - room owner
  - room guests
  - users with access rights to move furni in the room

- different power in relation to the 'national Habbo community'

  - the authors of the largest Habbo-themed fansites
  - the insiders of the largest Habbo groups/forums
  - the richest (most furni) users
  - the most opinionated users in the forums
  - the best game organisers
  - the owners of the most popular rooms
  - the most innovative room decorators
  - Habbo radio amateur reporters

Norms, Regulations and Rules

Which behavioral scripts do different stakeholders suggest?

- Habbo Way (created by the developers)
  - You must not
    * Tell your password to a Habbo, friend, staff member or stranger.
    * Tell anyone personal information which could be used to locate you or other people in real life.
    * Abuse, harass or bully other Habbos.
    * Use hate speech or make rude comments about a Habbo's race, religion, gender or sexuality.
    * Use any programs to hack, script or edit Habbo in any way.
    * Own, sell or run replica Habbo Hotels (retros).
    * Steal from or trick Habbos into giving you their passwords, Habbo Credits or furniture.
    * Discuss or take part in sexual acts with other Habbos.
    * Act out or roleplay violent acts, even as a joke.
    * Give away, trade or sell your Habbo account.
    * Break the law or talk others into breaking the law.
  - You should
    * Have fun!
    * Hang out with your friends
    * Make new friends
    * Respect other people's opinions and beliefs
- Privacy Policy, Terms of Use
- design principles
  - non-violence, easy access and easy play, everyone can play
- The hotel metaphor (as interpreted by the author)
  - 'you're a guest, behave as one'
  - 'you pay, it's not your home'
- different hotel rooms suggest different metaphors (and therefore different scripts)
  - so called public rooms—created by the developers
    * welcome lounges, spa, cafés, football stadium, entertainment (library, theatre, cinema), outside spaces (rooftop, gardens), games (Battleball, Snowstorm), Habbo club rooms, dance clubs and pubs, restaurants, lobbies, hallways
  - work as meeting places
  - the rooms decorated by the users—guest rooms (room categories from Habbo UK 06/2008)
    * official hot room

* quest archive
* chat, chill, and discussion rooms
* club and group rooms
* gaming and race rooms
* help centre rooms
* hair salons and modelling rooms
* maze and theme park rooms
* restaurant, bar, and nightclub rooms
* school, daycare, and adoption rooms
* theme rooms
* trading rooms
* all other rooms
– moderation
  * as guides
  * as policemen
  * as judges

History, Traditions, Persistence

How has the application in question evolved, what traditions have emerged, and which information is kept and why?

- no formal process during first two years
- since 2003—new releases 2–3 times a year

  – new features
  – brief user protests ('vanha kala takaisin')

- no record of chat history is kept

  – old and not used Habbo nicknames and rooms have been cleared once or twice (at least in 2003)
  – previously popular rooms tell their stories on post-it notes

- Habbo generations (the author's interpretation)

  – first generation of Habbo users: started 2000–2002 and quit by 2005
    * had the chance to actively shape Habbo, created many legends
  – second generation: started 2002–2003 and quit by 2007
    * more organised groups (e.g., mafias, armies, and other clubs) were formed
  – third generation: started 2005 or so, really thinking of quitting now
    * wasn't there when Habbo was invented
    * entered a fairly ready-made world and business
  – fourth generation: started 2007–8
    * takes the social networking side of Habbo for granted

Communicational Forms

How do stakeholders interact with each other?

- users
  - chat (writing) and acting (moving avatar) in a room
  - private messages
  - self-presentation on Habbo home pages
  - forum discussions in Habbo group home pages
  - decorating a Habbo room, giving it a name, marketing it (event arranging, game making)
  - by creating and authoring Habbo fansites
- users to moderators
  - help channel
- developers to users (mass-communication)
  - weekly newsletters
  - competitions
  - Habbo website (rules, norms)
- customers to the company
  - customer service, complaints, resolving of 'stolen' furni
- users to developers (feedback)
  - since 2007: feedback Habbo groups (e.g., Pilots of the Revolution)
  - early on (2000–2 or so): e-mail
  - fansite forums
  - user–2-user communication (some developers closely follow it)
  - aggregated actions: statistics
- advertisers to users
  - ads

Interactional Enablers

How is interaction made possible, and what kind of information is hereby suggested?

- User names, rooms, and virtual properties are conserved between playing sessions
  - persistent game world (no reboot)
- No duplicate names
  - one can trust that the same person is controlling the same avatar from time to time
- Habbo is a social proxy (3rd person perspective, same view to all)
  - it's a multi-player game
- Navigation

- - users use the Habbo navigator to move between rooms
  - the rooms are divided into 'public rooms' and 'rooms', which have previously mentioned categories
  - users can purchase teleports to directly connect two rooms

- Norms are propagated
  - by Habbo official website
  - fansites (forums) teach how to act in Habbo

- Inside a Habbo hotel
  - One can chat/interact with others in the same Habbo location (Habbo room)
  - interpersonal distance (in the room) influences propagation of Habbo speech (bubbles)
  - users can use voice control to say, shout, whisper
  - room owner can share rights to move furni in room
  - users can manage the great number of users through a friends list
    * the friends list provides Habbo location info
  - availability cues
    * avatar tags explaining avatar agenda /status /interests
    * avatar looks sleepy if it hasn't spoken for a while
  - social status/group identificators (avatar tags and groups)
  - audience control (door lock)
  - persistant texts (Post-it notes)
  - Habbo currency
  - furniture trading automat
  - chat filter

- data security: encryption of traffic between client and server, password mechanisms

- Habbo user homepages
  - Habbo widgets
  - report inappropriate content

- Paying mechanisms work

- Larger than Habbo
  - national, international, and bilateral regulations, policies, acts, constitution, data protection act, copyright

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Publications

Social media changes the game for user involvement in service design. Active user communities, fast paced iterative development, digital trails, peer production, and low cost software distribution are well known facets that bring substantial changes. The question is, have the user-centred, participatory, and lead-user design approaches kept up with the changes, or do they preserve an outdated perspective that holds us back?

In this thesis, the author distils lessons for designers, managers, and researchers from an in-depth case study of a pioneering digital service, Habbo Hotel by Sulake Corporation. The analysis demonstrates how collaboration and feedback loops between developers and users change over time. The key message, which concerns strategic user involvement, is to forget process guidance that relies on a stable and orderly software lifecycle and reconsider the implications for timing and method choice, for instance, in terms of developer–user social distance, cumulation of user knowledge, and relevant rhythms in development.

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