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# Appropriation and Creative Use: Linking User Studies and Design

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**Abstract**

Appropriation refers to the ways that technologies are adapted and repurposed to new purposes of use by individuals, groups or communities. This workshop brings together researchers interested in appropriation from CSCW and design. Until now, these communities have been working separately, despite their converging interests. The workshop is based on *roundtable discussions* that bring the participants' qualitative observations and theoretical viewpoints in contact with practical design efforts that support user creativity and appropriation.

**Keywords**

Appropriation, design, user studies, user creativity

**ACM Classification Keywords**

H5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous; H5.3 Group and Organization Interfaces: Computer-supported cooperative work.

**General Terms**

Design, experimentation, human factors, theory.

**Introduction**

Appropriation refers to the creative ways in which individual users, groups and communities adapt and repurpose technologies to serve their own goals, sometimes doing this in a different way than what was envisioned

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by the designers. Such emergent uses, often found in studies carried out using open-ended field trials, repeatedly remind us of the need to have better conceptual tools to address unpredictable user behavior and systems' potential for novel uses.

One of the most famous examples of appropriation is the use of texting on mobiles. Initially it was not developed with consumer use in mind, but as a method to utilize the excess network bandwidth during off-peak hours for a delivery of maintenance messages. Later, when provided also to consumers, it became a huge success and is nowadays utilized for myriad of purposes both in personal communication and commercial services.

Users may therefore take a technology into a use in a way that moves beyond its original design intention. In HCI literature this is usually documented either as something fascinating and positive that proves that people are more creative and innovative than most designers expect, or as a failure by the same reasoning: the designer has failed to take people and their practices into account – thus revealing a failure in the design process.

#### *Finding new roles and design goals for the designer*

The contradictions described above have initiated a discussion on the role of the designer. Should the designer abandon the attempt to design with a particular use in mind? [8]. To this end, critically oriented design approaches have presented different ways to leave more freedom for the users. One of the approaches – seamful design – strives to expose the seams, glitches and coverages of the mobile networks in artful and interesting ways so that users can make use of them [2].

Designs can also be made purposely ambiguous or de-familiarized, this way forcing users to create the meaning themselves through their choice of how to make use of them [6][16]. This has also been experimented in messaging research by extending the textual communication possibilities with semantically open-ended forms of expression such as body and hand movements [17].

Less critically-oriented researchers have proposed direct guidelines for designing for appropriation [5], solutions based on tailoring and end-user development [18] or searched for a new design approach for the designer. For instance, designer can aim for creating a "meta-design" that "seeds" the interaction and creates "mediators" that will to some extent shape the interaction, but leave room for design-in-use for the users [7].

#### *Finding out and explaining how users appropriate*

User studies, carried out actively especially in Computer-Supported Cooperative Work (CSCW) and Information Systems (IS) research, have suggested both theories and bottom-up observations of how appropriation has taken place in practice. Theoretical frameworks proposed include adaptive structuration theory [3][11], activity theory [14] and articulation work [1]. Studies have also drawn attention to the ways in which the "proper" purpose of use is negotiated between different stakeholders such as workers and managers [12][13] and how novel uses are promoted [10] or resisted [15] at a workplace. In addition to this, a lot of papers in conferences such as CHI and CSCW are published that present findings from open-ended field trials in the form of observed emergent uses, accumulating the set of scattered findings on appropriation.

The studies listed above provide a basis for conceptual reflection, but the knowledge is not crystallized enough to really provide an informed basis and tools for appropriation-centered design.

#### *Uniting the efforts*

Despite its importance on design's success, the understanding of appropriation in HCI, CSCW and IS is still quite scattered. The previous workshops in this area have focused on CSCW- and IS-oriented theories and themes<sup>1,2</sup>, experimental design exercises<sup>3</sup> and sustainability through reuse<sup>4</sup> but have not had much bridge-building and cross-fertilization between each other. Thus, over the years, two communities – designers and user researchers – have been working on this topic but have had limited interaction with each other, resulting in findings that are detached from design practices, or principles that have not yet received support from user studies.

All these attempts point to the need to shift our perspective from seeing design as something done once and for all and where the meaning-making can be foreseen and discussed already in the lab. Instead, design must be done interactively, together with users, or even by users, over time. Designs should be based on contested principles, empirical evidence, theories, or frameworks that help us better evaluate the design decisions in light of their support for appropriation. How much mileage can we expect in adopting this goal?

#### **The Workshop: Appropriation and Creative Use: Linking User Studies and Design**

This workshop provides a forum for the two communities – user researchers and designers – to meet and bring observations and theoretical viewpoints into con-

tact with practical design efforts. The workshop will have a format of thematic *roundtable discussions* in which the participants will share their knowledge and opinions of the possible and actual appropriations in different settings. The goal is to develop practical solutions and suggestions that on one hand lead to design decisions informed by theories, concepts or user observations, and are implementable on the other.

Topics of interest include, but are not limited to:

- user research methods that are suitable for gaining understanding about different forms of appropriation
- theories and conceptualizations of how appropriations take place, how different factors play part in them, and how they can be affected by design choices.
- design principles that support appropriation
- approaches that link theories and concepts with design
- critical viewpoints on the prevailing appropriation-related design and research practice.

There are several intended outcomes of this workshop. The workshop is planned with a purpose of making it useful, through dialogue between those working on appropriation in different ways, to understand better how to design for appropriation. This can also increase understanding of what has been done in this area, what remains as an agenda for the future, and who are the other people with whom to collaborate in the future. More generally, the goals also include suggestions to identify connections between user research and design so as to integrate them more closely together; disseminate such findings to a wider audience through joint

<sup>1</sup> "Evolving use of groupware" in ECSCW'99 and a follow-up special issue in JCSCW 12(4), 2003.

<sup>2</sup> "Supporting Appropriation Work: Approaches for the 'reflective' user" in ECSCW'05 (<http://insitu.lri.fr/ecscw/workshop7.html>) and a follow-up proceedings [4].

<sup>3</sup> "Designing Technology for Community Appropriation" in CHI'05 (<http://www.tii.se/reform/events/chi/>).

<sup>4</sup> "Examining Appropriation, Re-use, and Maintenance for Sustainability in CHI'10 (<http://jinah.people.si.umich.edu/chi2010/reuse.html>).

articles in magazines or journals, and generate more awareness, inspiration and interest in the HCI community about the importance of appropriation as a central element in successful design.

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