

Annotated portfolios for market design in the sharing economy

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1 Introduction

The sharing economy can capture value by making greater use of existing resources in specific local communities [1]. Local sharing can also promote social benefits, including greater community cohesion, realizing local assets [2], and in promoting a less materially focused lifestyle [3]. However, ownership of sharing platforms is an issue, where Bauwens and Niaros distinguish between extractive and generative ownership. Extractive ownership is characterized by profit maximization for absent owners, while generative ownership is characterized by contributing positively to life over the longer term, being rooted in its stakeholder community and being governed by its social and ethical mission [4].

Locally focused and owned sharing initiatives can act as markets [5], where the design of these initiatives can potentially make the best use of resources by matching needs to wants. This position paper for the “Design beyond markets” theme of the NordiCHI 2020 “Sharing & Cooperativism: Designing For Economies” workshop offers annotated portfolios, a design technique developed in the context of human-computer interaction (HCI), as being able to help facilitate the design of locally focused sharing initiatives as markets.

2 Annotated portfolios as a design technique in the sharing economy

Annotated portfolios were introduced in the context of human-computer interaction by Gaver [6], then developed further by Gaver and Bowers [7] and Bowers [8] as a means of making visible the design aspects of a particular artifact. In the sharing economy, annotated portfolio techniques can be used in the way suggested by Zimmerman and Forlizzi, where designers can create an artifact which ‘functions as a specific instantiation of a model – a theory – linking the current state to the proposed, preferred state’ [9, p. 44]. Recent work on applying annotated portfolio techniques to new domains beyond HCI [10, 11], and in the context of human-technology relations [12] indicates that there is potential to extend the technique to examining the sharing economy. This workshop paper examines the potential for annotated portfolios as a technique for designing local initiatives as markets in the sharing economy, starting with documenting stakeholder interactions.

Documenting, then annotating, stakeholder interactions that express wishes and desires to create a future sharing community can first articulate these wishes and desires as a

narrative, where Bruner [13] presented the ‘possibility of narrative as a form not only of representing but of constituting reality’, in this case new local sharing markets. Narratives can exist not only on the individual level, but also on group and societal levels [14], thus narratives can be helpful in designing local initiatives in the sharing economy.

A narrative formed by the wishes and desires of stakeholders in a sharing community can be viewed as an artifact, where the designer’s role is to facilitate the interactions between potential users that create the narrative, and then to articulate the latent designs in it. Annotation as a portfolio can help bring out these latent designs from a narrative of user and stakeholder interactions. A starting point for annotation can be the categories of choices that influence the design of an artifact [7], including:

- Functionality (what should it do?);
- Value of potential activities (is this worth doing?);
- Aesthetics (what form and appearance should the artifact take?);
- Practicalities (what materials, skills, and tools are needed?);
- Motivation for making it (why are we doing this?);
- People for whom it is intended (how can we best design for the users?);
- Sociopolitical concerns (what sort of culture will the design encourage or resist?).

In the context of peer-to-peer exchange platforms, Lampinen and Brown identify five concepts that they see as being ‘useful in understanding how participants can come together for different types of exchange’ in a market [5, p. 4339]:

- Thickness (gaining enough participants to make the market worthwhile);
- Congestion (avoiding it taking too long for participants to decide between options);
- Safety (of participants in the market);
- Stability (from optimum matching of participants through the market);
- Repugnance (the market is not objectionable to participants).

Annotated portfolio techniques are helpful in that they can make sense of large amounts of data by annotating it as a portfolio of designs, guided by the categories of design in peer-to-peer markets outlined above. By taking a design approach, such a process can potentially achieve useful results without generating large amounts of text, which can be a problem for ethnographic and other qualitative approaches.

3 Annotated portfolios as a methodology for working with communities

In applying this methodology to the design of peer-to-peer markets in the sharing economy, researchers can take these steps in working with members of the stakeholder community as research participants:

1. Identify a specific geographical or other community that could benefit from new sharing initiatives.
2. Identify community activists or other individuals who wish to make changes in their community.
3. Encourage and support interactions between these individuals, and with researchers or other facilitators, both online and through in-person workshops.
4. Document these interactions as appropriate (such as via an online forum or notes made at in-person workshops).
5. Annotate these interactions to create a narrative of the desires and wishes of participants and other stakeholders for their community.
6. Feed back the narrative to participants and modify as needed to take into account their reflections to arrive at a narrative all can agree on.
7. Work with participants and other stakeholders to articulate latent designs for sharing economy initiatives in the agreed narrative.

4 Conclusion

This position paper has introduced annotated portfolios as a design technique that can potentially enable researchers and community members to create new locally focused initiatives in the sharing economy. Considering these initiatives as markets enables the market design concepts of thickness, congestion, safety, stability, and repugnance to guide the annotation of narratives expressing the wishes and desires of stakeholders for a better future in their community.

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