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Towards reusable personas for everyday design

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Abstract

Personas are artificial character based representations of user goals, attitudes, motivations and abilities which enable designers to focus their design efforts on key, targeted users. The success of personas in design is due to their capacity to enable designers to empathize with users and understand user goals. Persona development is rooted in the rigorous collection and analysis of data specifically related to the design project being undertaken. New design projects thus require the development of new personas. Since redevelopment is not always achievable attention has turned towards reuse of personas and the underlying data. This paper reports on ongoing research into the development of reusable personas for use by non-expert, everyday designers. Such designers are regularly faced with small scale but diverse design challenges for which they cannot carry out user research and modelling. They can, however, make use of general, reusable personas developed independently of their current design project.

Author Keywords

Personas; practices; reuse; everyday design

ACM Classification Keywords

H.5.3 Group and Organization Interfaces

Introduction

This paper describes ongoing work which aims to extend the persona approach to user modelling [6,7] in order to support everyday designers in their design activity. These extended personas represent *populations and practices* rather than *people and products*. They are designed to be reusable for multiple projects, in contrast to conventional personas which are created for specific, focused design projects. They are also designed to provide rich contextual and practical information not typically included in persona descriptions. Consequently, they meet the requirements of a specific type of designer: the everyday designer, as described in the next section.

The Everyday Designer

Design is an activity that is undertaken by those who envision and create a new future. Design is not exclusively undertaken by experts, rather "*everyone designs who devises courses of action aimed at changing existing situations into preferred ones*" [28]. By foregrounding *courses of action* rather than *products* or *services*, design becomes an activity focused on the development of practices in the target population and not an activity exclusively focused on the production of an artifact. Non-expert designers – people untrained in design and unfamiliar with design terminology, tools and techniques, often find themselves in situations where they are required to undertake design "*aimed at changing existing situations into preferred ones*" for a given audience.

Everyday designers are non-expert designers who engage in design for a given population on a regular basis, but in an informal and often unstructured manner. A manager in a company, for example, may

be an everyday designer if she undertakes design activities intended to impact upon the practices of her employees. A teacher in a school, similarly, may be an everyday designer for whom his students are the audience. A community leader in a town may be an everyday designer who seeks to design ways to engage local people in community events.

Everyday designers tend not to become involved in large scale, well-resourced design projects. Rather, they design on an ongoing basis and on a small scale for a given user population. The everyday designer aims to design such that they can change the practices of the people in their target audience – for example, encouraging employees to collaborate differently, or students to engage better with the learning process, or residents of a town to communicate more effectively. The everyday designer is not interested in individual goals to the same degree that the product designer is. Instead, the everyday designer is interested in the practices currently undertaken in the population across a broad spectrum of activity. An understanding of the existing practices can enable the everyday designer to look at ways to extend or modify those practices to meet their design goal. As an example, knowledge of the use of mobile devices in the population can enable the everyday designer to consider ways to develop enhanced collaboration practices.

Everyday designers, therefore, require an understanding of *populations and practices*; not *people and products*. They require simple, accessible methods for developing this understanding, since they are unlikely to engage with design documentation in the way an expert designer would. Due to their simplicity, their narrative structure, and their effectiveness in

design, *personas* represent an appealing medium through which to communicate this information to everyday designers.

Personas

Personas [6,7] are archetypal users developed at the user research stage of a design project. They are rounded fictional characters developed using data collected from real users typically using ethnographic methods such as observation and in-depth interviews. Personas are represented using largely informal narrative and artifactual methods. Personas can be designated with different status levels in a design project with one or more primary personas selected as key design targets. The power of the persona approach is due to the empathy which such well-designed characters can invoke in designers and other stakeholders in the design process. By empathizing directly with a character, supporters of the persona approach [3,12,13,19] argue that the designer is enabled to project the character into future usage scenarios where their behavior can be predicted and shaped through the product or service being designed. Personas are designed with a particular product (or service) in mind. The persona descriptions and goals are directly linked to that product e.g. a shoe-shopping website. Personas, in that sense, are about *people and products*.

Personas were introduced to the interaction design community by Cooper and colleagues [6,7] to address concerns regarding designers' failure to understand and relate to users' motivations, attitudes, abilities and ultimately, their goals. Personas are developed by identifying behavioral patterns in research data and clustering users accordingly, as shown in the middle

layer of figure 1. Personas are used to answer questions with a focus on *people and products*, such as:

- *What does the user want to achieve when using a shopping app?*
- *What does the student want from an online course?*
- *What does the seller want to achieve in an online auction site?*

Layer 3 **Personas**	Rich, narrative descriptions of characters representing each of the clusters.
Layer 2 **Behavioral Variables**	Identifying dimensions along which users behaviors differ. Used to form clusters of users.
Layer 1 **Data**	Collected from interviews, observations, survey etc., to understand behaviors relevant to the product being designed.

Figure 1: Layers in the persona development process.

Persona Variations

Over time, researchers and practitioners have appropriated the persona approach in a variety of ways to suit specific design projects with many challenging some of the assumptions and principles upon which the original method was based. This includes challenges regarding the *reuse* of personas across projects and the incorporation of *contextual* information into persona descriptions.

Reuse refers to the use of personas or the research data collected for persona development for more than

one project. Cooper argues against reuse since a reusable persona would need to "*be based upon research concerning the usage contexts for all the products*" [6 p. 82]. He also identified clustering of behavior patterns across multiple product contexts as a major challenge and argues that reusable personas would be neither concise nor coherent. This may also lead to personas becoming stereotypical [30] or superficial [20]. This view contrasts with the approach of some practitioners who recommend looking at existing personas to see if and how they can be reused [1,24] in new projects without "*stretching the reuse*" of personas [23]. For example, a survey of design companies [19] identified that most companies surveyed who were using personas developed a cast of personas who they drew from in new projects, akin to methods for pooling and reusing personas described elsewhere [15]. Others cite the reuse of data rather than the finished persona as the preferred route, with designers revisiting data previously collected for the new design project [25,31].

Context refers to the inclusion of information about the environment alongside the personas. This type of information is often provided in scenarios [4], but these are typically focused on specific behavioral goals or are used for envisioning future use. Context is important because it recognizes that the individual has relationships with other people and things which guide their behavior and inform their goals. Much of what people do, it can be argued, is due to their social and material setting as much as it is to their personal goals and motivation [11,21]. Separating the persona from their context results in a much reduced picture being offered to designers who use those personas. Cooper argued against the need for relationships between

personas, preferring individual, unrelated personas. Giboin [9], however, references a no-longer-available document from Cooper which described *Organizational Personas* as a representation of a fictional organization with which a persona has a relationship. Similar contextual modelling efforts include the design of eco-systems for personas within which they act to achieve their goals [5], the modelling of technology [2], and the modelling of user-designer relationships [8]. Various methods for modelling groups and collaboration have been published [9,10,16,18,25], each seeking to address contextual issues and the setting within which the persona is situated.

Requirements for Personas for Everyday Design

Everyday designers do not generally carry out user research and will often rely on intuition or self-reference when designing for their audience. They may also lack sufficient understanding of diversity in the population and environment, assuming homogeneity where this is not the case. This limits the effectiveness of their design, in particular when they need to make decisions about practices about which they have little expertise e.g. the use of technology in their audience.

Personas can help everyday designers in empathizing with their users and gaining an understanding of diversity in the population. Conventional personas will not, however, provide everyday designers with the rich information they require about the practices which are enacted in the population. The everyday designer is interested in practices because existing practices provide everyday designers with a vehicle through which they can seek to create future practices. Because of their social and material constitution, practices

additionally provide rich contextual information often found lacking in persona models. Everyday designers require personas which can be reused on multiple occasions. Everyday designers, as non-experts, may not invest the time required to either develop or learn about new sets of users, but instead may root their knowledge of users in a model which they learn once. Everyday designers require personas which answer questions such as the following:

- *How to professors use technology?*
- *How do teenagers communicate?*
- *How to older people access government services?*

These questions contrast with those listed for conventional personas. The focus here is on *populations and practices*, not just *people and products*.

Practices

Practices are socially constructed, shared, practical understandings of how to do something (whether that is how to greet with a handshake or how to ride a bicycle, as examples) [17,22,27]. Practical knowledge doesn't exist independently of its enactment in a situated environment but an understanding of practice can be gained through observation of the practice being enacted. Its evolution and dynamics can be investigated through methods of inquiry such as interviews and document analysis. Posthumanist accounts of practices recognize the contribution of materiality (such as a bicycle, a laptop or a search engine) to the formation and dynamics of practices [21,29]. Practices therefore have multiple elements and dimensions, and are not simply human behaviors. A widely referenced description of practices, referring to these multiple dimensions is:

"A routinized type of behavior which consists of several elements interconnected to one other: forms of bodily activities, forms of mental activities, things and their use, a background knowledge in the form of understanding, know-how, states of emotions and motivational knowledge" [26]

In a field traditionally focused on the interaction between the human and the computer, the practice lens forces a shift in perspective for the HCI researcher who seeks to understand what is happening in a setting that involves humans, computers, other material and a historical trace which has led to the moment under investigation [14,17,22].

Reusable Personas for Everyday Design

Personas which meet the requirements for everyday designers are developed according to the three layers shown in Figure 2, in contrast to the three layers for conventional personas shown earlier in Figure 1.

The essential difference between these personas and conventional personas is that they are centered on an inquiry into the practices in a given setting, including the components of the practice (social, material etc.), the enactment of the practice and the history or career of the practice. Once investigated, the practice is documented using an accessible, narrative approach comparable to scenarios and stories [4]. Using these descriptions, the designer can access information about practices such as *working from home*, *checking email on mobile phone*, *sharing information on social media*. Importantly, these are not just behavioral variables used to cluster individuals – they are full narrative descriptions of practices which emerged in the social, material, cultural and historical context.

Layer 3 **Personas**	Rich, narrative descriptions of the meeting points of clusters of practices. May be a group or an individual. Used to communicate practices to everyday designers.
Layer 2 **Practices**	Rich, narrative description of the practices which emerged from the data. Practice descriptions document components, dynamics and enactments of practice.
Layer 1 **Data**	Collected from interviews, observations, survey etc., to understand components, dynamics and enactment of practices.

Figure 2: Alternative layers in the persona development process.

The top layer is occupied by personas, as before. Personas now, however, represent meeting points for practices, and consequently typically represent individuals who engage in multiple practices. They could also, however, represent groups, technologies, or material artifacts involved in multiple practices. The narrative description of the persona is derived from the information in the practice descriptions, and enables the everyday designer to acquire an understanding of the person, their goals, their practices, their motivations and so on. The personas remain connected to their practices, however, meaning that the everyday designer can access the middle layer and the detailed narratives describing the practices.

This approach requires a much broader study than typically takes place in persona development. Each of the practices have a scope comparable to the scope of a conventional persona development project.

Collectively, they capture a range of diverse practices which are undertaken by the population being studied.

The everyday designer is not involved in the development of the personas – this is an activity undertaken by design experts. The everyday designer will, however, engage with personas to understand the diversity of practice in the population, to identify practices which can be leveraged in their own design activity, and to empathize with the people for whom they are designing.

The everyday designer gets to know their personas once and continues to engage with them over time. They do not need to engage with new personas for every design project.

Summary

This paper describes a proposed extension to the persona approach which draws on relevant literature on personas, practices and design. An early version of this approach was previously trailed for a project which sought to develop personas which model how academic staff in a university use technology, with the aim of enabling everyday designers in the university to make better use of technology when designing for that population.

Further inquiry into that setting is ongoing and will lead to the development of complete personas modelling the population and practices.

Future work will also explore the development of tools which enable effective engagement between everyday designers and the model of personas described here.

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