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CUSTOMER, USER, OR CITIZEN? A COMPARATIVE ANALYSIS OF HUMAN- CENTERED DESIGN PARADIGMS.

Luca Baldini*^a

^a Sapienza University of Rome, Italy

* l.baldini@uniroma1.it

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ABSTRACT | A person is always a human being but not always a user, a citizen, or a customer. These terms bring normative and value models that shape how we think, act, and design. And yet, central to design thinking theory and practice, they are used interchangeably. This short paper explores the point of convergence and contrast between different people-centered paradigms. Through systematic literature review, two distinct clusters are identified: the first connects customer and user centrality and is concerned with situated and solution-driven instances; the second associates citizen and human centrality and refers to undefined and discovery-driven instances. This comparative analysis suggests that more research is needed to frame design thinking better when introduced to the public sector, as different values and tensions might be at play. It is the purpose of our Ph.D. proposal to address the knowledge gap at the boundary cracks between design thinking and complex policy change, where design is confronted with politics, power, and democratic dialectic.

1. Introduction

In recent years, growing discontentment with democratic politics has increased worldwide (Foa et al., 2020). In addition to internal pressure, governments are confronted with external burdens of ambiguous, volatile, “wicked” problems (Brown, 2010; Buchanan, 1992). As governments seek solutions, innovation in the public sector appears to be a promising path to foster citizens' engagement on one side while reducing costs and improving efficiency on the other (Lewis et al., 2017). However, more innovative forms of government do not necessarily reflect more open, accessible, and democratic governance (Johnson & Kolko, 2009). Amongst innovation paradigms, design thinking (DT) has captured the attention of governments worldwide (Kimbell, 2016). DT derives from the processes and methods of industrial designers, expanding on the concept of “human-centered design”, often referred to as “user-centered” (Norman, 1998, 1992), which aims at including human factors in the design of information and technology systems. Although the public sector is not new to design thinking (Howlett, 2014), it is the application to the business endeavors that propelled its diffusion, creating methodologies that reflect a business and commercial mindset (Cross, 2019; Shah et al., 2000; Sheth et al., 2000). However, it appears that simply translating DT within the context of public services and policies does not come effortlessly (Brinkman et al., 2023; Tromp & Hekkert, 2019).

Despite the different endeavors, the terms human-centered and user-centered design have been used interchangeably (ISO 9241-210:2010), as well as “citizen” and “customers” (Osborne and Gaebler, 1992), whether or not they have similar meanings or implications. The different paradigms are based on the concepts of “humans,” “users,” “citizens,” and “customers,” which are not synonymous, and they refer to specific, situated, and contextualized instances. A person is always a human being, but not always a user, a citizen, or a customer. These terms bring normative and value models that shape how we think, act, and design (Denhardt and Denhardt, 2000). Lewis et al. (2019) argue that when design thinking meets the power structure of politics, it risks disestablishment. Simply applying the commercial paradigm of design thinking to the politics of policymaking might not be the answer. There is a new and exciting space of research, a locus where lies a broader opportunity for design to make an impact. Our PhD research aims to address the knowledge gap between design thinking and high-level, strategic, and complex policy change.

In this paper, we first investigate similarities and differences in relationship, audience, scope, and values of customer, user, human, and citizen-centric paradigms. Secondly, two clusters are proposed, each with distinct qualities. Finally, we present further research implications for design thinking in the public sector.

2. Four Human-Centered Design Paradigms

In this section, we discuss four human-centered paradigms that sit at the core of design thinking theory and practice. We first introduce customer centrality; then we discuss user-centrality; third, we present human centrality, and we conclude with the citizen-centrality paradigm. Each of these paradigms is scrutinized in terms of relationship, audience, scope, and values.

2.1 Customer-Centrality as a Competitive Advantage

The attention toward customer wants is not new to the industry context, Levitt (1960) argued that companies should not focus on selling products but rather on addressing customer needs. The move from product to market-driven firms already began with the new marketing science (Keith, 1960), whereas customer centrality emerged as a powerful way to establish mutually satisfactory customer relationships (Day, 2003). According to Boulding et al. (2005), there is a double value exchange between customers, who manifest their needs, and firms, which activate their internal resources to meet customers' requirements while, in the process, creating value for the firm. Ultimately, customer centrality provides the most profitable, and not easily countered by competitors, way to develop close customer relationships (Shah et al., 2000). In this paradigm, customer feedback is integrated into participatory decision-making processes;

the supply chain makes available the resources for highly customized offerings (Lamberti, 2013), and customer needs permeate the whole organization, continuously adapting to customers' preferences, including their emotional, and ethical, social selves (Sun, Li, & Zhou, 2006). In short, the main characteristics of the customer-centricity paradigm imply:

- Establishing a bidirectional relationship with the customer, which is exclusive and targeted.
- Increasing the profitability of the firm while creating value for the customer.
- Transforming the whole organization to fulfill customers' needs.
- Implementing solutions and offerings to contingent and defined customer requirements

2.2 User-Centricity Improves the Usability of Technology Systems

Donald Norman coined the term “user-centered system design” to refer to the practice of engaging the users of designed artifacts, bringing their needs and perspectives into the design process (Marti & Bannon, 2009; Norman, 1988). User centricity is rooted in the mix of ergonomics and psychological studies that seek to recognize the many factors that describe users as humans, reclaiming their role in the interaction with technological systems (Gould et al. 1998; Nielsen 1993). According to Richter and Fluckiger (2014), the user-centered approach involves understanding the user and the context, designing a suitable solution to the problems identified, moving from solution to prototyping and development, supporting the implementation, and finally evaluating the results through user-testing (Gulliksen et al., 2010). Comparably with customer-centricity, user-centered design impacts the whole organization throughout the development lifecycle (Kapor 1990). User centricity increases user productivity and operational efficiency, lowers costs related to training and development as a result of products being more understandable, and improves affordability, accessibility, and overall usability (Chammas et al., 2015).

In conclusion, user-centricity is characterized by:

- A clear action cycle that rotates around the object of usage, which needs to provide feedback on its use to the user him/herself.
- Full iterative integration of users in the design process.
- Improving overall efficiency and efficacy of a system interacting with humans.
- Addressing well-defined and known technical issues.

2.3 Human-Centricity Reflects Human Dignity

Originating from the European human-centered movement of the 1970s, human-centered design acknowledges cultures, practices, and costumes that make humans human (Gill, 1996). According to Boy (2017), human-centered design emerged in contrast to the engineering sciences, which believe that engineers lead the design, and only then can users give feedback on what is produced. Initially lingering towards human rights and human dignity (Buchanan, 2001), the concept of human-centered design was encapsulated by the user-centered approach (ISO 9241- 210:2019). However, the original human-centric paradigm seems to consider a stronger focus on the specificity of cultural diversity when interacting with a design artifact, be it a policy, a service, or an interface. It works with concepts such as human purpose, participation, representation, and tradition (Buchanan, 2001;). On the contrary, the user-centered paradigm is concerned mainly with user practice and user modeling, focusing on the relationship between users and technology without questioning how and why technology might be of service in supporting human activity (Gasson, 2003).

To summarize, the human-centered design paradigm's characteristics are as follows:

- Humans are at the core, as defined by their multiple diverse cultures, practices, and ethnicities.
- It is an essential instrument for implementing and embodying the principles of human rights and human dignity in everyday life.

- Serves human beings and their context in their various activities.
- Establish new forms of participation and representation.

2.4 Citizen-Centricity is Complex and Multifaceted

Despite the growing popularity of the term “citizen-centered” applied to services, policies, and even governance models (Bergvall-Kåreborn & Ståhlbrös, 2009; van Velsen et al., 2009), it seems that governments struggle to be more citizen-centric. Følstad et al. (2004) argue that the lack of user involvement might be one of the reasons for governments to fall short of this promise. However, both Kotamraju et al. (2012) and van Velsen et al. (2009) agree that much of the criticalities are to be found in the differences between governmental services and their commercial counterparts.

Public services address heterogeneous user groups and therefore cater to different cultures (Sandberg & Pan, 2007), capabilities (Wang et al., 2005), political convictions (Oostveen & Van de Besselaar, 2004), and disabilities (Legge 9 gennaio 2004). Citizens access complicated content, which is often linked to policies, and its ownership is shared across public institutions, requiring not only interoperable systems but also interoperable capabilities (Interoperable Europe Act, 2022). In addition, in public services, the provider-user relationship is complex and often characterized by friction and tensions (Brinkman et al., 2023; Tromp & Hekkert, 2019). Notably, even the least repressive and most democratic governments are coercive institutions: they seek to provide for citizens' needs, even if this means going against their wishes - e.g., paying taxes (Kotamraju et al., 2012). Lastly, governments are held accountable for the present and for the future, extending the scope to include intergenerational justice (Glotzbach and Baumgärtner, 2012; Gall et al., 2021).

We can identify some distinct properties of citizen centrality, namely:

- The relationship is ambiguous and, at times, conflicting.
- Civil, political, and social rights are intrinsically embedded.
- It is held accountable for accessibility, usability, and dignity of all.
- Address the plurality of human voices, providing international and intergenerational justice.

3. Comparative Analysis

Through a systematic literature review, four human-centered design paradigms were scrutinized. From the analysis, we identified three main characteristics that sit at the intersections of the four paradigms. We list them as follows:

- The involvement of not-experts in domains first led by experts only (Norman, 1988; Shah et al., 2000);
- The enhancement and improvement of processes and services (Marti & Bannon, 2009; van Velsen et al., 2009);
- The transformation of organizations from within, aligning it to people's needs and requirements (Boy, 2017; Sheth et al., 2000).

Secondly, we interrogate each paradigm on the relationship it establishes, the audience it refers to, its scope, and the value it embeds. Two distinct clusters emerged with defined qualities. As illustrated in Table 1, the first cluster relates to context-dependent instances, whereas the second cluster concerns fundamental rights-dependent instances. The first customer-user cluster refers to situatedness and works with known socio-technical problems. Both customer and user centrality establish an exclusive, bidirectional relationship between customer/user- firm/product, are transaction-oriented and solution-driven (Marti & Bannon, 2009), and technology is key to establishing long-lasting customer-firm relationships (e.g., Apple products or Amazon services). On the other hand, the second cluster of human

and citizen centrality encompasses humans as well as non-human actors (e.g., the environment) because it considers fundamental human rights (e.g., access to clean water and sanitation, etc.). It is multimodal and problem-discovery driven and establishes a multi-directional, inclusive, and diversified relationship across actors' systems (Brinkman et al., 2023; Gasson, 2003). Ultimately, its humanism emerges from the centrality of positive social impacts, such as in the Cool neighborhood (New York, 2017) and Climate shelter projects (Barcelona, 2021).

Table 1. A Comparative Analysis of Human-Centered Design Paradigms.

Clusters	Cluster 1: Context-dependent	Cluster 2: Rights-dependent
Human-centered design paradigms	User and customer centrality	Human and citizen centrality
Relationship	Bidirectional - exclusive and contextualized.	Multi-directional - inclusive and diversified.
Audience	Focuses on the user or customer which is specified and determined.	It encompasses "humans" as well as "non-humans" actors as it acknowledges human rights.
Scope	Discrete, works with socio- technical known problems.	Complex, deals with wicked and unknown problems.
Values	Transaction-oriented and solution-driven.	Multi-modal oriented and problem-driven.

Each set of clusters contributes to shaping different normative and value models. Consequently, the methodology might not be transferred easily across or even result in negative impacts on the new context (Denhardt and Denhardt, 2000). In public sector endeavors, simply applying a user-centered approach to solve complex challenges without reconsidering the whole set of processes, tools, and methods might be counterproductive. Citizen and human centrality address specific sets of issues, which are positioned at the extreme of the value spectrum of the user and customer-centricity paradigms. Whereas the former might be more appropriate for complex policy reforms, the latter might be more useful for discrete service redesign instances. Rather than considering the terms human, user, customer, and citizen interchangeably, it is crucial to investigate their synergies and divergences as they embody different normative and value models.

4. Conclusions

Considering the growing interest in applying design thinking to policy and services, we scrutinized four human-centered paradigms to clarify differences and synergies. Two clusters were proposed according to similarities and differences in relationship, audience, scope, and values. The first customer-user cluster is context-dependent, whereas the second human-citizen cluster is rights-dependent. Further research into the methods, practices, and processes of each might be required to improve the robustness of our comparative analysis. From this analysis, additional research questions arise: Which position do these clusters play in the public sector, particularly when introduced to the policy-to-service process? Which capabilities are necessary for design professionals to deal with the politics of the policy process and the normative culture of public institutions? Starting from this comparative analysis, we will conduct PhD research to address the knowledge gap at the boundary cracks between leadership, design thinking, and strategic public policy reforms.

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About the Author:

Luca Baldini explores spaces that foster unconventional cross-pollination between different sectors and disciplines. His research investigates how to accelerate the transition to a regenerative and distributive society through redesigning public institutions, processes, and governance models.

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