New Views on Innovation: Comparing Jobs To Be Done with Hierarchy of Goals

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Abstract
In this essay, I will argue that the theory *Jobs To Be Done* [3] can be explained by using the model *hierarchy of goals* [6] and how both are important tools to open up new perspectives on innovation. Further, I will discuss how the theory and model can inform the development of new speculative techniques, following the increasing usage of *Make-Tools* [13] in empathic design. Finally, I make a plea for a broader adoption and further exploration of collaborative envisioning methods across different Human-Centered Design approaches to stimulate 'radical' thinking within individuals and communities.

Author Keywords
Human-Centered Design, Innovation, Jobs To Be Done, Empathic Design, Speculative Design

Introduction
Human Centered Design (HCD) is a constantly evolving practice. Driven by the industry and commerce on the one hand and the human curiosity on the other, the desire to understand what we, as humans, users or customers want is intrinsic to our nature.

Capturing verbally or nonverbally expressed needs and desires, measuring physiological, psychological and sociological data are all considered as deployed (modern) human centered methods. [4]

In 2018, HCD is practiced within government and NGOs, the public sector and every possible area of the industry. As HCD carries an open structure with unclear borders, its use has been interpreted differently across organisations. In 2001, Richard Buchanan [1] describes the first principle of Human Centered Design as:

"Human-centered design is fundamentally an affirmation of human dignity. It is an ongoing search for what can be done to support and strengthen the dignity of human beings as they act out their lives in varied social, economic, political, and cultural circumstances." (p.37)

But when considering the definition given in the book *User Centered Engineering: Creating products for Humans* by Richter and Flückiger [11], the authors state that the different approaches of HCD have a common goal to: "systematically develop and improve products for the people who use them." (p.3)

Comparing this with the first principle by Buchanan [1], we face the practical application with the ideological fundament. As HCD became part of the core practice of many industries, it has changed business strategies and inner organisational structures. Putting the human being and its surroundings central in the design process, ended up defining the corporate branding and communication of businesses towards customers in order to position themselves against competitors. It seems as companies which do not promise to customer centricity will have a hard time remaining above water. The obsession with the user is leading to the rapid birth of new design fields and innovation theories.

Human-Centered Designer

Having a closer look at Empathic Design, a HCD approach in which practitioners attempt to empathise with the people they are designing for and their environment. Mattelmäki et al [8], are pointing out that empathic designers do not merely try to understand how people act and interact in a certain way, but are also interested in why we choose to do something and how people express their emotions in their everyday lives.

Pursuing this practice is a challenging task. As Steen [14] argues that practitioners of HCD have to balance the understanding of the other, with the understanding of the self. Steen describes two tensions. The first one is between project team-members and users, as researchers and designers have different knowledge and cognitive frameworks than the people they are designing for. The second tension reflects the challenge for designers to both understand the present, and design for the future at the same time.

Tools for Thought

Marc Hassenzahl [6], proposed in his book *Experience Design: Technology for All the Right Reasons* a three level hierarchy of goals in which he tries to connect the ideal self with the material world. At the bottom line, there are the *motor control-goals* that describe single actions people execute such as picking up the phone and dialing a number. What drives these actions are the *do-goals*, which would in this case be 'making a phone call'. And if we ask ourselves why we want to make a phone call, we reach the final level, the *be-goals* that drive the *do-goals*. 'Making a phone call' can not be considered as the final goal in itself as there are a variety of *be-goals* reaching from 'be competent' to 'be connected' which can drive this d*o-goal*. [6]

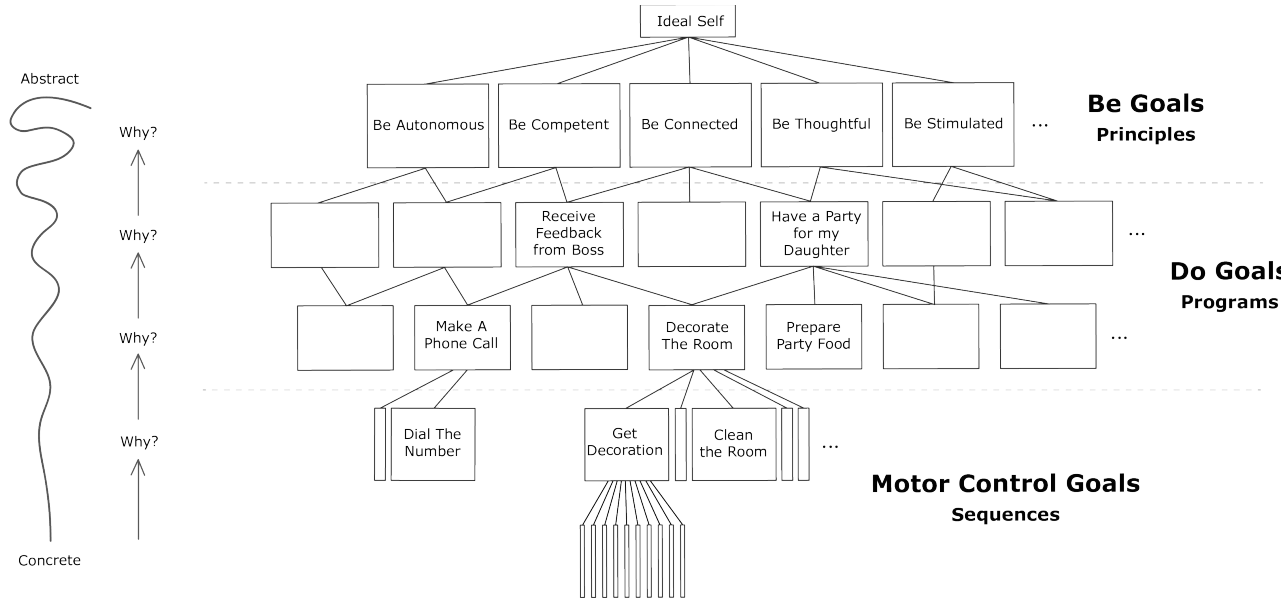

Fig 1: An adaptation of the model originally proposed by Carver and Scheier [2], used and reworked by Hassenzahl [6]

The origins of the model date back to 1973, when William Powers [10] suggested it to explain that there is a hierarchical organization to the self regulation of behaviour. Later, psychologists Carver and Scheier [2] adapted the model to indicate that there are goals to *be* a certain way and goals to *do* certain things with *motor control-goals* on the lowest level performing the final physical movement.

Much of the great product design of the previous century is located on this lowest level in the *hierarchy of goals*, such as a rice cooker assisting to prepare rice. Services today are helping to achieve multiple *do-goals* which serve several *be-goals* and are taking over as many *motor control goals* as they possibly can. For example by providing not only a smart steamer, but also the fresh produce packaged in the exact quantity you need. The steamer will prepare your meal and take up multiple steps of the *do-goal* 'preparing dinner'. The next step might be including a food plan for the family and a personal training program so the service provider can address the be-goals 'be healthy' and 'be thoughtful' directly.

A recent development within innovation theory, called *Jobs To Be Done* (JTBD) [3] in which practitioners are searching answers for the question: What are customers ultimately trying to get done? The *Jobs To Be Done* theory, mainly developed and popularised by Clayton Christensen of the Harvard Business School, argues that every person has little or big *jobs* to

accomplish, and that people hire products or services to help them do it. [3]

The focus on the functional aspect of a *job* contributes to the popularity of JTBD theory. Eliminating the emotional drivers and demographic factors, should make the theory more concrete and workable. Unlike HCD, which focuses on the people and their environment (Who are the users?), JTBD puts the emphasis on the underlying *job to be done* (What are the users ultimately trying to get done?) and not the person performing the job. [15] An immigrant man of 50 could have the same *job to be done* as a young mother in her twenties. This underlying job can be compared with the *do-goals* in the model of *hierarchy of goals*. This change of perspective, shifting the focus from the human itself to the human's job, makes it difficult to categorise JTBD as a human-centered approach. But I argue it is, taking into account that both are striving for the same end goal which is making great products and services people will buy.

Imagine yourself looking for party decoration in a toy shop. What would be your *job to be done*? It could be decorating the house. But do you really want to decorate the house? No, you actually want to have a birthday party for your daughter. And that is your *job to be done*, or *do-goal*. Searching for decoration was only a sub task of the job. You also need to think about what food to serve, what gift you want to buy her, how you will invite the other kids and so on. In order to serve you better, the toy shop could not only offer you the party decoration, but also inspire you with ideas for food, offer a pancake or cupcake mix and help you with the invitations by having a direct printing and posting service. Then, the toy shop would help you better with the job of 'having a birthday party' and, according to the theory, will make the shop stand out from its competitors. If you ask yourself why do I want to have a birthday party for my daughter? You would reach the *be-goal* which drives your *do-goal* such as 'being thoughtful'.

Finding the right *job to be done* can be very challenging, especially if you want to situate the job on the *hierarchy of goals.* As there are many sublayers of do-goals. The model is not meant to be taken literally but can offer an abstract holistic overview of the motivation behind an activity. In the case of the toy shop, the ideal *job to be done* to work with, would be *having a birthday a party*. Defining the job too narrow such as *decorating the house*, could limit the discovery of opportunities whereas defining the job too broad such as *pleasing my daughter* might lead to non-actionable insights. [15]

Both JTBD and the *hierarchy of goals* can help designers and innovators try to step up and down the abstraction ladder, making sense of what people want and positioning those needs and desires to the company's or organisation's resources and capabilities. Although JTBD is a more suitable approach to inform business strategy, HCD is better suited for providing incremental enhancements to existing services or products.

Incremental Innovation

But what makes JTBD an innovation theory and Human Centered Design an approach to problem solving? According to Norman and Verganti [9], HCD is only suitable for incremental innovation as Norman testifies that he was unable to find any proof of radical

innovations that happened through taking a person or a society's needs into account. [9] Concerning JTBD theory, there is not a single example provided of radical innovation which is not reversely engineered to serve a positive narrative. Up to date, JTBD theory can, if executed well, only lead to incremental innovation.

Kasmire et al [7] reject the idea of radical innovation, claiming that innovation is a purely incremental process. The authors state that the conceptual breakthroughs linked to radical innovation are in fact composed of small inventive steps which seemed logical to the inventor. They critique that within innovation studies, only inventions that were picked up by the general people are taken into account, not the inactive inventions that might have served as building blocks.

Looking back at the model *hierarchy of goals*, I argue that the *be-goals* are stable over time. Many of the *do-goals* driven by the *be-goals* are, although more fragile, also stable over time. Over the next 50 years, someone could still want to 'be thoughtful' as well as it is highly likely that someone still wants to 'hold a birthday party' for their daughter.

But the question is which other *do-goals* will develop throughout the upcoming years to serve the more stable *be-goals*? What activities will people undertake to serve their be-goals and can you design those new activities? What are ways to serve 'be autonomous' or 'be competent' better? A simple product will probably not be the answer. But it can be part of it. For that, the first principle of Human Centered Design, as being fundamentally an affirmation of human dignity, will become increasingly important. [1] Designing for higher, more abstract goals, will require a collaborative and multidisciplinary approach backed by time and a strong collective vision.

Tools to Dream

Designers have been practicing dozens of techniques to get closer to the user to understand what they say and how they do things, uncovering the needs and desires which Sanders [12] calls *explicit and observable*. But to uncover and search for what is *tacit and latent* within people, is still a much less explored path for designers, especially in the industry. In 1999, Sanders and Dandavate [13] made a plea in their paper *Design for Experiencing: New Tools*, stating that:

"The ability to not just know, but also to empathize with the user comes only at the deepest levels of their expression. By accessing people's feelings, dreams and imaginations, we can establish resonance with them. Special tools are needed to access the deeper levels of user expression." (p. 2)

The authors argue that in order to reach these deeper levels of expression, tools which facilitate non verbal expression and generate emotional artefacts that tell stories are necessary. These 'Make Tools' can offer common ground for people from different disciplines to communicate. [13]

Anno 2018, the use of Make Tools has increased and a variety of new design fields have emerged stemming up from Human Centered Design. With co-design and empathic design on one end and speculative design on the other end, Giacomin [5] describes the upcoming speculative techniques as:

"... real fictions and para-functional prototypes (Dunne, 2008), creative new approaches are being developed and deployed which immerse people in one or more possible futures, providing them with the opportunity to socially experiment the envisaged product, system or service and to form personal perspectives and opinions." (p. 615)

Also in the field of empathic design, efforts have been made to reach beyond what can be verbally expressed by creatively applying methods with the aim to uncover the implicit and unconscious desires and dreams.

Conclusion

Both the model *hierarchy of goals* as well as the innovation theory *Jobs To Be Done* are important frameworks to understand why we do things. It can inform design decisions from the inside out to come up with new ways to serve the more stable *be-goals*. At the same time, following a positive evolution of speculative techniques, I argue that enabling users to envision and dream for themselves and their environment will become increasingly important. Bringing people in an imaginative mode might reduce skepticism towards structural change and encourage individuals to become the designer of their own future landscape.

Referring back to the tensions introduced by Steen [14], it seems as if the newly emerging approaches of HCD are trying to bring both the user and the designer closer together while bridging the present-future gap. By inviting users to co-envision and immerse within possible future scenarios, providing an opportunity for people to step outside their present-tied thinking and creating space to dream.

If designers, researchers, artists or hobbyists continue to challenge their cognitive frameworks and take enough others on their journey, I can see an imaginative future for human-centered design. Planting seeds within individuals and communities for co-incremental radical innovation.

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