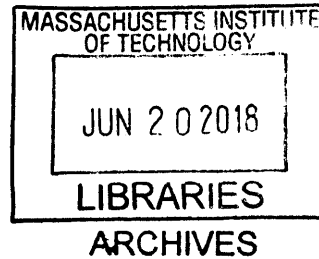


# Whole Human Design: Designing for Humans, not Users

by

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B.A. Business Administration  
Georgetown University, 2011



Submitted to the Integrated Design and Management Program in partial fulfillment of the requirements of the degree of

**MASTER OF SCIENCE IN ENGINEERING AND MANAGEMENT  
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# **Whole Human Design: Designing for Humans, not Users**

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Submitted to the program of Integrated Design and Management, in partial fulfillment of the requirements for the degree of Master of Science

## **Abstract**

In the past ten years, the Human-Centered Design methodology has exploded—permeating our organizational and academic worlds and becoming one of *the* most sought-after skills. The user-first mantra has become widely accepted and internalized. *Develop empathy! Find users in their natural habitat! Design for their needs, not yours!* Despite its vast popularity, I believe there is a great flaw and irony in the way we practice Human-Centered Design today: without the human. Though a human perceives his/her life as a dynamic whole (Gestalt Theory), we reduce him/her to a 'user', a shard of his/her full Self. This thesis explores the foundations of a new methodology, Whole Human Design™, that seeks to re-unify the human and equip us to design for users in the context of their whole humanness.

To that end, this thesis first seeks a usable definition of the Human and our human needs, by exploring a wide range of philosophical and psychological perspectives—from material/atomistic definitions (like those found in Behaviorism) to Phenomenology-inspired definitions (Existentialism, Humanistic Psychology, Positive Psychology) to Religious perspectives. From there, based on an ethnographic research with 50 individuals, this thesis introduces a design framework, the Periodic Table of Human Elements™, a tool to connect functional and latent needs of a user to his/her deeper human roots. Finally, in order to illustrate how this methodology can be practiced, this thesis presents a case study of how Whole Human Design was used to solve a \$300B real-world problem, medication adherence.



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# Chapter 1: Introduction

## Background and motivation

I was sitting in the home of a young couple who had given birth to their first child a week prior. They were trying to give off the semblance of put-togetherness, but it was impossible to hide the commotion of their first week home: the dad's gaze fell downward deliriously in between his sentences, the house smelled like the inside of a dishwasher before you run it and closets were jammed closed to hide the items that had been strewn away in anticipation of my arrival. The entire situation felt like it was in a delicate state of orderliness—as if one wrong move would bring the giant tower of baby bottles in the drying rack crashing down, or one wrong question would bring the new mom to tears.

I was 23 at the time, below average in awkward avoidance ability, yet we were discussing one of the more personal topics I could imagine: the experience of breastfeeding a newborn. This was not a situation I had ever imagined myself in, or that I was entirely prepared for, but the Era of Human-Centered Design has made one thing clear: *know your user first, design products second.*

The goal of this project was to redesign one of the most universally-hated pregnancy products, the breast pump. And as the team's design strategist, it was my job to understand the breastfeeding/pumping experience firsthand. In my seven years as a practitioner, design strategy has taken me into emergency rooms, living rooms, and businesses across the world. I've shadowed a monk in a monastery, spent days of my life behind the counter in pharmacies and even interviewed a divorcée as his ex-wife packed her boxes behind us—all with one goal: understand your user. *Think their thoughts, smell their smells, see their life.*

In the past ten years, Design Thinking/Human-Centered Design has exploded—permeating the ethos of corporations, academia, and even our social lives. (I know one couple who created design principles for their marriage.) As designers, we're more powerful and employable than ever before. As users, we're listened to, and products reflect our lifestyles like never before. And we all lived happily ever after [1].

Not so fast. Even though the TED Talks have been given, the workshops have been run, and the corporate strategies have been set, the methodology is not finished. This thesis explores what I consider the most important evolution required of the Human-Centered Design practice.

should probably cite references on the design thinking and human centered design here. bruce archer coined the term design thinking back in the 60s, though david kelley undoubtedly popularized it around 10-15 years ago (art of innovation). user centered design was popularized in the early 90s by Don norman in his book The Design of Everyday Things.

### **What we're missing**

Most practitioners have a strong opinion of the pitfalls of Human-Centered Design. The surest way to get their eye rolls and deep exhales is to reference "Design Thinking"—which tends to bring up connotations of empty-headed post-it sessions and shelved projects.

There's also significant variation in the way Human-Centered Design is practiced. Every practitioner has his/her own techniques and flair, much like a painter may have a brush stroke that is uniquely his/hers. Being side-by-side with other practitioners has showed me their unique call signs—like taking field notes in a way that fills up every centimeter of your notebook or elongating the pause in between questions to encourage a respondent to keep talking.

These enhancements to the typical HCD process are powerful, but my hypothesis is that we're missing something bigger in the way we practice Human-Centered Design, which is best illustrated through a moment that I've noticed on every project.

The stage is set when a team returns from the field and begins to analyze what they learned. At this point, their heads are like water towers, filled with stories, questions and images from the field. The team begins the process of releasing the data and uncovering a user's needs. Typically the most easily recognizable observations spill out first. These are the functional facts, usually stated or observed directly:

- "Using a breast pump hurts."
- "Mom only has one breast pump, and it's really hard to transport it between work and home."
- "It makes an awful whirring sound."
- "The breast pump mom uses in the hospital is not the same as the one in the home, and this adds confusion."
- "Every mom said it makes her feel like a cow."

Though this understanding is surface level, it's still useful for the design process; this is the level from which enhancements to currently existing products come from: *Fix that sound! Make it hurt less! Make it easier to transport!*

After the obvious is regurgitated, the team swims deeper, uncovering latent needs and deeper user insights. These not things that a respondent necessarily explicitly said or pointed to, but they are gleaned by careful observation and sensemaking. A good practitioner notices the story beneath the story: what was said and what was left unsaid.

- "It seems like moms' expectations are totally off. She expects that breastfeeding will be easy, but it's actually incredibly difficult."
- "Dads feel helpless because there's nothing they can do to improve the outcome of the situation."

This deeper layer of analysis leads to a richer opportunity space and more innovative solutions that go stretch the role of the product. *It's our job to make sure mom has the right expectations going into it! We need to create a role for dad!* This is where true product evolution come from and what good design thinking is powered by.

The moment that I'm focused on usually happens at a random moment as the team has settled into a deeper discussion about what they saw in the field. From the outside, it might not look like much, and it can be easily brushed aside. something like:

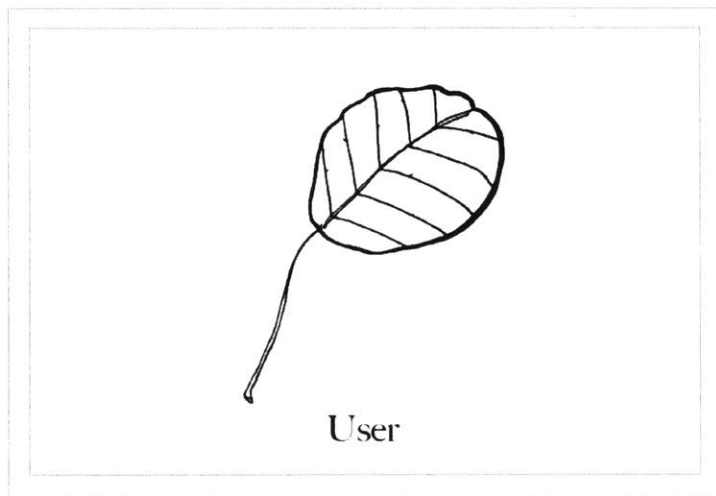
- "It's almost like this is her first real test as a mother, and if she fails, she feels like she will be a terrible mom."

This may seem like a logical progression of thought, but perhaps unknowingly, we have just crossed into a new territory: from the dimension of a *user* into the dimension of the *human*. We are no longer talking about the impact of a product on the user's isolated product experience; we are talking about the impact of a product on a human's sense of self. This is a very fragile moment because these comments do not seem immediately actionable. Thus, they're often branded as squishy and abstract or as thoughtful but put aside because the team is unsure what to do with it. This is the moment that Whole Human Design seeks to empower.

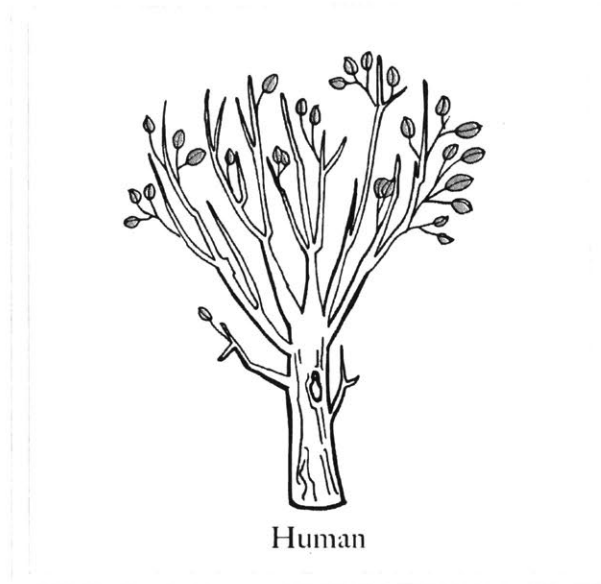
Let's unpack the difference between a user and a human bit more. Isn't every user also a human being? Yes. Undoubtedly. But understanding a "user" is fundamentally different from understanding a "human." When we seek to understand a user's needs we seek to understand a small part of the human, the part that is fully related to the product. Just think about a breastpump journey map—a breast pump user buys a breast pump, opens the breast pump,

learns the breast pump, uses the breast pump and ultimately replaces the breast pump—she exists, as a user, in full relation to that product, like the earth orbiting the sun. Conversely, when we seek to understand a human being, we explore all aspects of that life. A human has hopes, routines, and people that far extend beyond the breast pump that she may own. Think about the journey map of a human life vs. the breast pump journey map—the breast pump experience is small part of the overall network of the human.

A tree seems like the best analogy—understanding a user is like studying one leaf of a tree. Today, in Human-Centered Design, we rigorously study the small hole in the leaf from a caterpillar’s bite, it’s unique shade of green, the times it gets sun throughout the day. We even might expand our scope and study the branch that connects the leaf to the rest of the tree.



But understanding a human being is like studying the entire tree—that leaf is connected to a powerful root structure; it is powered by a macro process, photosynthesis, and it contributes a tiny part the full undulation of a the tree’s crown in the breeze.



When you really think about it, there is no such thing as a “user” because, like a tree, a human can’t be sliced and siloed. A user is an artificial scrape of a full human being that we create for our convenience. In short:

*We can call them a user...but they're not.*

Even when a product is being used, no one stands in full isolated orientation to it. When was the last time that you identified as a ‘patient’, ‘bank account holder’, or a ‘customer’ instead of just...you. We don’t shed our deepest human and, thus, no set of user needs will ever accurately depict the situation. Mixed with the most functional needs is always an underlying current of what we seek as a person, thus our needs can only be considered as a swirling and multidimensional whole, a Gestalt.

In the Mid-20th Century, amidst the background of World War II, Gestalt Theory was pioneered by Max Wertheimer, Kurt Koffka, and Wolfgang Köhler. Having only recently fled



Hitler Germany, these Psychologists saw the “miserable picture of human beings” [2]. that psychology portrayed (human beings as conditioned animals) and how “senseless and dangerous this was in face of actual problems confronting the world.” [2]. Instead they studied some of the most serious issues of human existence—how an organism thinks and feels and seeks harmony in the world.

Most notably, the Gestalt Psychologists studied human consciousness and how we perceive experience. Through visual and motion studies, they argued that human beings don't perceive in isolation or in fragmentable pieces. Humans bring a holism to the way they perceive the world and their Self (*“the Principle of Totality”*). As an illustration of that principal they used figures like these.

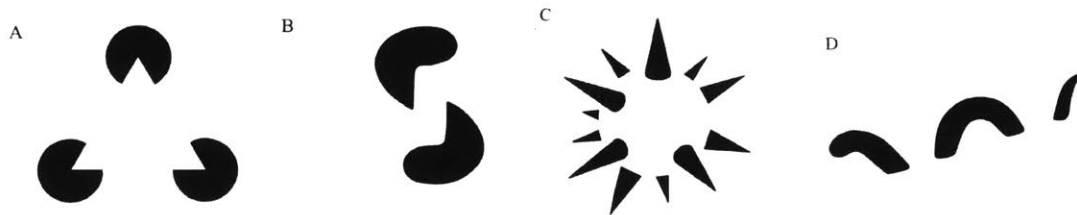


Figure 1. These are representative of the Gestalt principle of X

When we look at these models, we don't see independent and unrelated black shapes; in an unexplainable way, our brain uses the black shapes as input and creates a new, non-existent shape from the pieces. That was the ultimate point behind Gestalt Psychology: *“the whole is other than the sum of its parts”* [3]. In the same way, this is how we perceive our Selves—as a synthesized and meaningful whole, generated as an entity beyond the discrete

elements of our consciousness. And importantly, “often, this ‘whole’ is grasped even before the individual parts enter into consciousness” [2]. Today, in Human-Centered design, by corralling “users,” we shatter their whole and explaining a user out of their full context. This is led me to ironic realization (and the main motivation for this thesis):

*Today, we practice Human-Centered Design, without the Human.*

Why does this distinction matter? A practitioner could argue that this is semantics...call it a user...call it a Human...we're in a lot better shape than we used to be now that we consider user needs. Agreed. The era of Human-Centered Design has led to more empathetic and useful products, and businesses no longer make products based on their needs alone. Though, if you consider the opportunity cost, the implication is much greater. Today, by isolating a user from his/her human roots, we are minimizing the impact a product can have on a life. We can improve a leaf, not the tree.

### **The need**

I don't think this was an intentional error in our field. And I think most great designers naturally incorporate as much human as they can into the analysis of a user, but I don't think this is something we're well equipped to do. Understanding human needs is a massively overwhelming and frustratingly unanswerable. This is why designing for a human tends to take a back seat: we sense the murkiness and we tend to swim more in a safer level of user needs. Our greatest need as designers is a structure and a method for understanding a human so we can design for a user in the context of his/her *whole humanness* (i.e. “*Whole Human Design*”).

## Research questions

With that need in mind, the goal of this thesis is to develop to a support tool for designers to understand the experience of their users in the context of their user's greater humanness. This leads us to a hairy territory for research because, in order to understand a user experience in their greater context of the human experience, we have to answer the most fundamental questions in life: *what is a human? what does the human need? what makes a human happy?* These questions, or better described as *the* questions, have been explored and unanswered for millennia. I will not seek to answer the unanswerable, but I will synthesize what we know today and develop a frame of mind and a toolset for the designer to approach these questions and design in the context of a user's humanness. Finally, more tactically, I will explore how a whole human approach can be applied to the case of drug adherence and the results of doing so.

## Approach

While each human is unique and experiencing life in a completely marvelously nuanced way, I will be standing on the shoulders of philosophers, psychologists, poets, writers, and artists to explore the common elements that a human being faces as he/she exists. I will call these ontological givens the "Human Elements," defined as elements of human experience that contribute to our happiness and overall well-being.

I'll do that in four main parts:

- **Chapter 2, The Human:** First, I will review a spectrum of paradigms that seek to provide context to our Being: Behaviorism, Phenomenology, and Religion.
- **Chapter 3, A New Proposed Framework | The Periodic Table of Human Elements:** With that theoretical foundation, I will share the analysis of my own qualitative research with 50 humans and my proposed framework for understanding our human elements *The Periodic Table of Human Elements*.
- **Chapter 4, Whole Human Design:** I will begin a conversation on how to employ Whole Human Design to design for a user in the greater context of his/her humanness, using a real-life project as a case study. I will showcase how to create a 'Whole Human Needs List'.
- **Chapter 5, Foundations for future work:** Finally, I will explain the work that is left to be done to improve the Periodic Table of Human Elements and to continue to evolve the methodology behind Whole Human Design.

## Chapter 2: The Human



Again, if we're going to design for a user in the context of his/her humanness, we need a framework for understanding the the Human.

When I started researching currently existing frameworks for understanding human nature, I learned is that we have far more questions than answers to basis of our existence. Actually the nature of these questions actually seems to defy words or understanding, as if they're surrounded in a perpetual fog. As explained by Virginia Woolf, "one can't write directly about the soul. Looked at, it vanishes." It seems like we are programmed with an inherent mystery—to not fully understand our own wiring or see beyond what is directly observable. Yet, even though we don't have an answer this question, for millennia, we continue to drive right at it.

And this, in itself, may be one of our most defining characteristics: we seek explanation of our Being and we seek meaning for our presence on the planet. It's not something a pride of lions is concerned with as they rest up for their next hunt or even something that your family dog considers when he waits for a stray piece of food to fall from the table. And that drives our need to explain who and what we are. As explained by Hannah Arendt in her 'The Life of the Mind', *"The need of reason is not inspired by the quest for truth but by the quest for meaning."*

This is not a newfangled development in our culture of being. Exploring these fundamental questions of our existence seems like an in-built feature to our consciousness and is evident across the millennia. While reading the *Art of Living*, Epictetus' manual on virtue, it was striking how, even two thousand years ago, in 55 CE, the Stoics were reflecting on the same questions that we ponder today. In his guide for a good life, Epictetus' suggests that "happiness can only be found within" and he suggest that we keep our "attention focused entirely on what is truly your concern and be clear that what belongs to others is their business and none of yours" [4]. This 2000 year-old piece of advice immediately reminded me of a

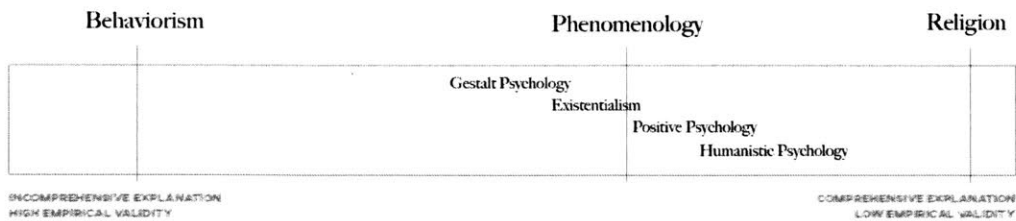
modern day saying from Rupaul, "what other people think of me ain't none of my business." To me, there is not better representation of the our persistent search for meaning as a dialogue that connects Epictetus and Rupaul.

## Knowing

Our existence has been explored through religion, psychology, philosophy, and art. I will provide a bit of context in the vast landscape of Knowing. Not surprisingly, there has been much conflict in what we are capable of knowing or claiming about our existence. "What is a human?" has many corresponding questions. These seem to be the three many questions of existence:

- **Who are we?** (aka "what is a human?")
- **Why are we here?** (aka "what is the meaning of life?")
- **How can we live a good life?** (aka what values should we live by?)

In exploring how others have approached those fundamental questions, so much will be missed. I will explore three main paradigms that seek to answer these questions, which I see these paradigms on a spectrum: from low to high empirical validity and low to high comprehensiveness of explanation of our existence. The far right, Religion, provides the most comprehensive explanation of who we are and why we're here by through Absolutes, which are powerful but not empirically questionable. On the far left, Behaviorism provides the least comprehensive answers to our existence but has the most empirical validity. In the middle, Phenomenology (and the movements it inspired: Existentialism, Gestalt Psychology, Humanistic Psychology, Positive Psychology) is in the middle and balances the two factors.



## Religion

In the face of the massively uncertain context of our lives, we crave answers to our existence and the Divine Absolutes found in Religion are often the avenue that seems to most confidently prescribe answers to the preeminent questions of our Being. A new survey from the Pew Research Center found that 89 percent of Americans believe in God and 74 percent believe in some form of life after death [5]. Every culture in every era of human life has had some Absolute framework for adding certainty to the mystery of life and guidance for how to live well. The Absolutes are sturdy answers and perspectives for our biggest existence questions, built partially on divine explanation and part lived experience and emotion.

At the end of the day, the Absolutes are empirically improvable yet widely believed and enormously powerful. While science builds confidence through empiricism and repeated measures, the Absolutes gain validity through our personal and emotional experiences—which can be more powerful than a repeated measure. Despite their lack of empirical soundness, the lived experience surrounding the Absolutes can have the most profound impact on a human. Many times it's all the proof a human needs. Lifelong proof and Belief may come from just one



moment in a human's life—far from a lab or a controlled experiment—a visceral, emotional, and unquestionable burst from beyond. A feeling replaces the repeatable measure measure, but wrapped up in chills and these moments of bliss, is just as strong of an indication of what it means to be Human.

For example, one of those moments for me was in August of 2016, British Astronaut Tim Peake ran a marathon on the International Space Station. You could feel the UK's pride in its first astronaut--Adele even gave him a shoutout from the stage of the Grammy's. That night, I was sitting on the dock at my cabin in Wisconsin looking up at the night sky. It was one of those nights where the temperature outside seemed to match your internal temperature exactly, and I felt part of, in suspension, with the rest of the lake. Like we were one big jello mold. Hundreds of miles from a city, the stars were so dense, layers laid upon layers and layers, from horizon to horizon. It felt like the film had been removed and you could stare directly into the infinite, surrounded and intertwined in it. I felt an alarm on my phone sound, and as I looked I realized I had gotten an alert from a NASA app--the International Space Station was now visible from my location. Without pause, over the trees in the horizon a new, rapid star appeared, streaking upward, circling the sky, and drawing the orbital outline of the planet. With my mouth open I imagined Tim Peake, resting from his 26 mile day, on board the flash of light. And as it disappeared behind the treeline, the world felt different--small and intimate. Familiar and knowable. Smackingly beautiful.

In 'Searching for Stars on an Island of Maine', Alan Lightman, physicist/professor of humanities at MIT, describes that "in search of explanation of our existence and guidance and how to best live our lives, we can turn to irrefutable precepts and principles. [the absolutes]" [6]. He explains that despite our certain death, we find comfort in the permanence of our soul or in

the reason of our existence. They provide rock solid answers to many of the unanswerable questions and “share the qualities of permanence and changelessness, ubiquity, perfection that can anchor and guide us through our temporary lives.” In fact, all major religions have a framework for humans to anchor their existence and from which a human can model his/her behavior.

<i>Religion</i>	<i>What is Being?</i>	<i>How can we live a good life?</i>
Buddhism	A journey of finding freedom from suffering	The Dharma (the Four Noble Truths & the Noble Eightfold Path)
Christianity	The process of seeking divine salvation	The Ten Commandments
Islam	A test to find closeness to Allah	The Five Pillars
Judaism	The process of elevating the physical world in preparation of the world to come	The Seven Laws of Noah
Hinduism	The journey of freeing self from karma and future suffering	Purushathas

**Behaviorism.** *Understanding humans through stimulus/response*

Psychology became a scientific discipline in the late 1800's, which also brought the scrutiny of the claims that it could make. At the heart of the debate is the “mind-body problem”: in short, humans have a physical existence--measurable in degrees, electrical and chemical flows and atoms, but humans also exist as a conscious experience, an “I”. We are part material

and part “spirit” or “soul.” Behaviorists believed that humans could only be known through objective observation and measurement of the human’s material existence, the conscious experience was off limits [7]. For example, Pavlov’s Dog Experiment is one of the most well-known Behaviorist studies. As we know, in this experiment, Pavlov found that there are certain unconditioned responses that are “hard-wired” into our biology (dogs salivate when they are presented with food), while there are other conditional responses that are learned through experience (ringing a bell will eventually cause salivation by itself if presented with food through a period of conditioning).

Behaviorism believed that the new discipline of psychology needed to be held to the same standards as the natural sciences. In science, the Periodic Table and the atomic weight of an element was an objectifying factor that allowed for direct comparison across time. If everything is made of atoms, every scientific situation could be reduced and explained through an atomic response. Yet, there was no objective baseline for stepping beyond the materialness of a human, thus confining psychology’s ability to study “the mind,” or the experience of consciousness. This was thought to be the domain of art and literature.

So Behaviorists sought to “construct an objective and independent world of physical things, physical space, physical time, and physical movement, and had to maintain that this world appears at no point in direct experience” [7] and looked for the stimulus-response relationships as a way of explaining the human being. Basically, a subject (“the object”) is put in a well-defined situation to which he will react in a pre prescribed way or another (in alignment or against your hypothesis). Behaviorists measure that response without any input from the direct experience.

As a result, the Behaviorist understanding of a human being was overtly physical and rudimentary. Behaviorists reduced humans to innate *behavioral* drives--like the drive to reproduce or the drive to satiate hunger. This was the 'image of man' that psychology was responsible for, which led to a great dissatisfaction and a large shift to occur.

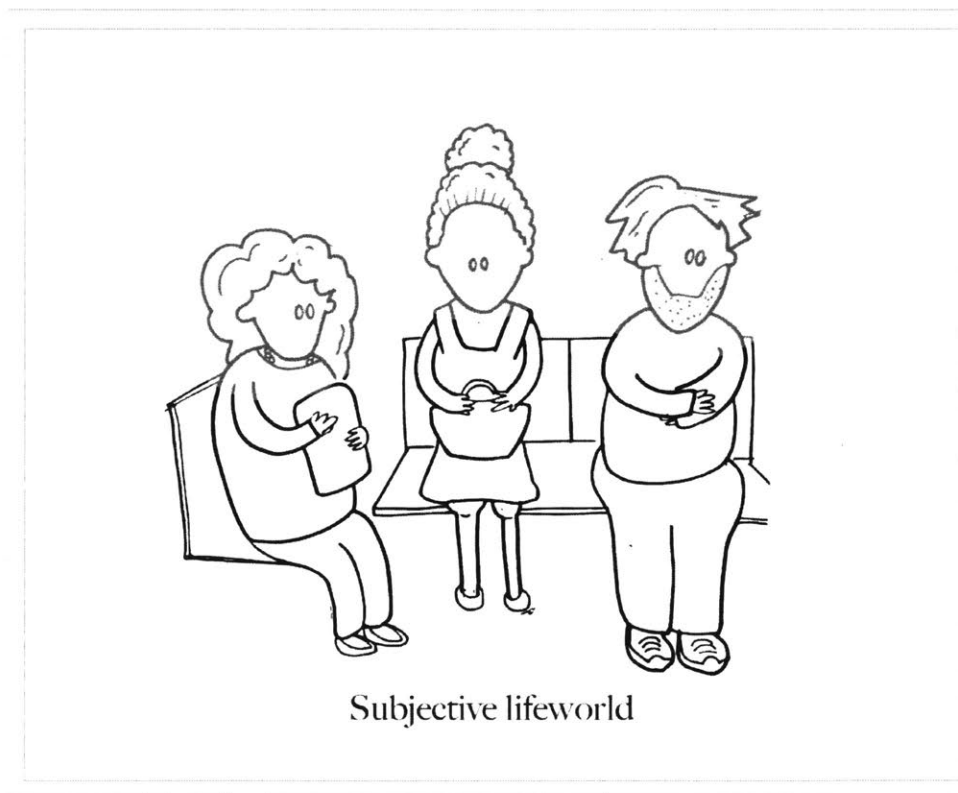
	<i>What is a human?</i>	<i>What is Being?</i>	<i>How can we live a good life?</i>
Behaviorism	A material body made up of atoms and molecules	The experience of consciousness that comes from the sum of our material body	By fulfilling biological drives

**Phenomenology (early 1900's).** *Understanding humans through subjective experience.*

Phenomenology arose in the early 1900's with Edmund Husserl, a mathematician-turned-philosopher. In opposition to the hollow portrait that Behaviorism had painted of humans, Husserl believed that, "we desperately need a richer, deeper conception of reason, one that would comprehend the "life-world," that is, the world of lived experience, in all its diversity and complexity" [8]. This was a subject matter that had been ignored in psychology until this point.

Phenomenology sought to go beyond atomistic content, which gave little insight into human life and develop a method for understanding the phenomenon of meaning and consciousness in a life. Phenomenology sought a "rigorous description of human life as it is lived and reflected upon in all of its first-person concreteness, urgency, and ambiguity" [44].

European naturalist Jakob von Uexkull used an analogy that helps make Phenomenology come to life. Imagine that you've blown a fancy soap bubble around yourself. When you look into the world, you see all the other creatures with similar soap bubbles around themselves. Through the bubble, the creatures sees the world as it uniquely appears to them, not as it appears to other entities in the world [9]. Seeing life through that bubble, is your *phenomenal world* or your *lifeworld*.



Phenomenology was developed as a valid method for analyzing the soap bubble of other humans, unearthing these first-person experiences of life and unveiling the structures of

conscious experience and uncover the logic of meaning in the world. Phenomenology refused to strike experience data from the record on the grounds of its subjectiveness. This was a radical departure for the natural sciences, and Husserl even wrote “I would like to think that I, the supposed reactionary, am far more radical and far more revolutionary than those who in their words proclaim themselves so radical today” [10]. This movement opened domains—for the first time, “anything that is experienced was available for phenomenological study, not just physical objects, but also numbers, values, feelings, time, truth, and so forth” [8].

The Phenomenological method spurred many movements in philosophy and psychology that introduced a vibrancy to human nature theory that hadn't existed beforehand including: Gestalt Philosophy, Existentialism, Humanistic Psychology, Humanistic Philosophy and Positive Psychology. In seeking a definition of the Human and a framework for understanding the Human Experience, these phenomenology-inspired domains are where we have focused and from which we have found the most usable definitions.

### **Existentialism (~1945-1960)**

Existentialism was a philosophical movement that emanated from France. While its roots were with Kierkegaard in the late 19<sup>th</sup> century, it flourished after World War II with a group of novelist/philosophers who powered their inquiry using the Phenomenological method. These thinkers explored *the* most fundamental of questions of all: *what is the meaning of life?* Some of the minutiae of Existentialism was debated, but they agreed upon its fundamental concepts.

- **A human** = a ‘Self’ | an uncompleted project

The Existentialists believed that it was impossible to define the universal truths of a human or to provide a universal framework that neatly encapsulated human nature or wellbeing.

Obviously, we have our biology in common, but the Existentialists saw blood vessels and skin as relatively trivial in our higher definition. Instead, a 'human' is synonymous with a 'Self', an "uncompleted project...which each individual is responsible for realizing" [11]. They believed that the Self does not have fixed properties. For Jean-Paul Sartre, the Self is a 'freedom' 'to be' and for Martin Heidegger, it was a kind of 'potential'.

There's something wildly powerful in this definition of a human, and we will end up it later in our Whole Human Design methodology. It seems to sit at the right level: not overly prescriptive in a way that demeans our incredible nuance and complexity but of the human being but descriptive enough to characterize the experience. Furthermore, the Existentialist definition allows for tremendous flexibility, honoring our ability to change as partially completed projects instead of fully-formed and fixed entities. Finally, there is something poetically beautiful about this definition. What if we saw every human as if they were in an active state of creation, working little by little to grow into the potential that they felt deep within? How would that change the way you looked at other? How would that change the role you assumed in other people's lives?

It's also worth pointing out why the Existentialist philosophers were so against the universal characterization of a human being: a universal definition encourages mindless acculturation rather than fulfillment of life's true purpose, to define your Self individualistically. If the purpose of a human life is to create the Self, it is the duty of a human to separate himself or herself from this kind of categorization of the "masses" [11]. In the new industrial economy, the Existentialists believed that humans were being reduced to 'unthinking work-units' and that this 'herd' led to mindlessness and a metaphorical lobotomization of life. Imagine if there were a

blueprint to the human being; it would mean that no human would have to figure that out for him or herself. Contrarily, as explained by Nietzsche,

"It follows that we must wish to be real helmsman of this life rather than allowing it to be thoughtless and arbitrary. One must take a somewhat mischievous and dangerous attitude towards existence. [Nietzsche]

- **Being** = taking hold of your 'Self' and actively creating it

In the face of the unanswerable existence, Existentialists believed that the control that one possesses is the ability to create him/her Self. This is done through a reflection of the current Self (the 'in-itself') and the imagination of future Self (the 'for-itself'). Moving oneself from his/her current embodiment to a future embodiment was what the Existentialists saw as the true state of Being, actively holding responsibility Self creation. Therefore, existing in this state of Being allowed the spirit to awaken and break through its 'dream-like' state. In fact, Existentialists referred to this shift—from an inactive mindless existence to a state of Being—as *the Awakening*. Again, the Existentialists avoided specific definitions or classifications of humans, but this divide was a clear and powerful segmenting factor among humans: is the human in a state of Being or not. Even though, in Existentialist thought, the state of Being was the ideal position for a human in life, they didn't consider it to be carefree because, with the Freedom to be comes a dizzying number of possibilities. Therefore, one of the Existentialist givens in life was the concept of anxiety, stemming from the ultimate freedom to create the Self in any direction he/she pleased.

**Living a good life** = 'authenticity'



Given their definition of self and Being, the ultimate 'virtue' for the existentialists was *authenticity*, the "state of acknowledging one's distinctive individuality" [12]. Each existentialist had his/her own definition of this concept, but overall authenticity is a recognition of one's Self and his/her responsibility for it. Heidegger defined authenticity as "resolutely embracing one's being-unto-death" for Sartre it was "owning one's radical freedom and responsibility" Authenticity defines a condition of "self-making: do I succeed in making myself, or will who I am merely be a function of the roles I find myself in?" [13] Overall authenticity is referenced as living in a state of truth towards oneself [12].

	<i>What is a human?</i>	<i>What is Being?</i>	<i>How can we live a good life?</i>
Existentialism	A self, an uncompleted project	Take responsibility for making self and living in an active state of self creation	Authenticity

### **Humanistic Psychology (~1950s & 1960s)**

Humanistic Psychology was an American school of thought that built directly on Phenomenological methods and Existentialist thinking and ultimately sought to transform the way human beings were understood in Psychology. With that purpose in mind, it was described by the American Association of Humanistic Psychology in 1962 as a "third force" of psychology (a new way of approaching psychology as an alternative to Behaviorism and Psychoanalysis). Humanistic Psychology refused to accept the predominant view of human beings as "primarily responding to, and being shaped by, the various determining influences that impinge upon them from within or without" [14] (i.e. a human being is more than just mindless systems that respond

biological drives). It sought a positive view of human nature. This explanation from 'Encountering America: Humanistic Psychology, Sixties Culture, and the Shaping of the Modern Self' the leader, Abraham Maslow's, problem with psychology:

*To Abe Maslow, this narrative of psychology had it exactly backwards. Whatever glimmers of promise and progress there were to be found in America in the 1950s—and the ever-optimistic Maslow identified many—American psychologists seemed constitutionally incapable of recognizing them as anything other than disturbances to tamp down. They were too negatively oriented, sickness-focuses, problem-centered. They lacked, he argued, an imagination for people at their best, and for the ways they could aid in the amelioration of social problems" [15].*

Instead, the movement was concerned with topics like:

*love, creativity, self, growth, need-gratification, higher values, being, becoming, spontaneity, play, humor, affection, naturalness, warm, ego-transcendence, objectivity, autonomy, responsibility, meaning, fair play, transcendental experience, peak experience, courage, and related concepts.*

This subject was particularly salient in the 1950's and 60's, a society that was unsettled by World War II and its consequences, haunted by the looming threat of Cold War and alienated by technological change. Champions of the movement, like Abraham Maslow, Carl Rogers, and Rollo May, explored endemic questions similar to those of the existentialists: what does it mean to be healthy and happy? What is the point of life? How can individuals find meaning in their lives? Humanistic Psychology was strongly identified with the human potential movement of the 1960s.

Humanistic Psychology was drawn from the lineage of subjective study that we have traced in this paper. In fact, the five central principles of Humanistic Psychology were nearly exact summation of the subjective movement:

- **Humanism is strongly phenomenological or experiential.** (Phenomenology)

Remember the soap bubble analogy? Every human lives with his/her lifeworld, a

subjective awareness of his/her Self and the world he/she inhabits that drives his/her movement through it. Phenomenology (and Humanistic Psychology) believed that the study of a subject's conscious experience can be accepted as reality and fact.

- **Humanistic psychology insists on man's essential wholeness and integrity**

(Gestalt Theory) Remember the tree metaphor? Humanistic Psychologists believed that humans doesn't perceive in isolated fragments, they perceive meaningful whole. Thus a human must be studied as an integrated creature, not an isolated element.

- **Human beings retain an essential freedom and autonomy in existence**

(Existentialism) Remember the herd and the masses? Humans are not lifeless passive beings, Their utmost responsibility is to their Self—to control the decisions they make on their active life journey.

- **Humanistic psychology is anti-reductionist (Phenomenology)** Remember Pavlov's

dogs? Humanistic Psychologists refuse to reduce human beings to basic drives or atomic elements. A human being is other than his/her material body.

- **The human can never be fully defined (Existentialism)**

There can be no universal framework for understanding who we are and what we do. By creating this, we limit the infinitely expandable personality of a human and we remove the ability to truly exist.

Ultimately, the movement burned out in the 1970's because it was reduced to an overly emotional fad of the Flower power era, like bell bottom jeans. Even so, I see Humanistic Psychology as leaving an incredibly important legacy for human nature theory. Humanistic Psychology collected many of the themes and principles of its surrounding disciplines, like

Phenomenology, Gestalt Theory and Existentialism, and it provided two of the only comprehensive frameworks that exist for understanding human nature (Maslow's Hierarchy of Needs and Roger's Actualizing Tendency). I will present both of these models because, in our search for a Whole Human Framework, these are the best foundations that exist.

### **Carl Rogers' Actualizing Tendency (1961)**

Alongside Maslow, Carl Rogers was a clinical therapist and leader of the Humanistic Psychology. His insight into the Human was formed through his relationship with his clients and he uses examples from these sessions in his 1961 book, 'On Becoming a Person' to explain his perspective on human nature.

Rogers saw a huge range of personal problems while counseling at the Center of the University of Chicago. He gives examples from the "popular girl who finds herself unaccountably overtaken by sharp spells of black depression; the woman who fears that life and love are passing her by; the man who has become convinced that powerful or sinister forces are plotting against him..." [16]. Even though every human has his/her own situation and contextual problem, Rogers ventured that despite this "horizontal multiplicity and vertical complexity, there is perhaps only one problem." The problem is defined through this line of internal questioning:

*"Who am I, really?" and "How can I become myself?"*

- **A human** = an unmasked person

Rogers believed that a human is the truest version of your Self is the way you think, feel and behave deep down—undisturbed by the influences of others and unmasked/unconcerned with

how others expect you to be. Rogers helped clients find this version of themselves by giving them safety and freedom in the therapeutic relationship to explore their own inner world. In the safety of their therapeutic relationships, clients would look behind the false fronts or masks and find “something more basic, something more truly himself [or herself].” He uses the example from one of his clients who was explained her realization of a personal mask she had grown accustomed to.

*“I somehow developed a sort of knack, I guess, of – well—habit—of trying to make people feel at easy around me, or to make things go smoothly...I just didn’t stand up for my own convictions, until I don’t know whether I have any convictions to stand up for...I’ve just been playing a sort of false role” [16].*

Rogers explains that a client “often discovers that he exists only in response to the demands of others [and their conditions of worth], that he seems to have no self of his own.” He called this *incongruity*: the space in between the Real Self and the Ideal (masked) Self. And therapy was the tool that would help these humans resolve this incongruence.

- **Being** = “The process of maintaining and moving a Self towards its full potential”

In 1974, Rogers made a speech that introduced his concept of the *Actualizing Tendency*, an inherent tendency within ourselves to grow and reach our full potential and to minimize our internal incongruity.

Rogers pointed out that there is formative tendency built into the laws of the universe:

*“It is hypothesized that there is a formative directional tendency in the universe, which can be traced and observed in stellar space, in crystals, in microorganisms, in organic life, in human beings. This is an evolutionary tendency toward greater order, greater interrelatedness, greater complexity. In humankind it extends from a single-cell origin to complex organic functioning, to an awareness and sensing below the level of consciousness, to a conscious awareness of the organism and the external world, to a transcendent awareness of the unity of the cosmic system including people.”*

He believed that this formative tendency of the universe also exists within our Being as well and gives us an Actualizing Tendency, the “urge to expand, extend, develop, mature—the tendency to express and activate all the capacities of the organism or the self.” (p. 351)

- **Living a good life** = four characteristics of a fully functioning person

Rogers was adamantly against prescriptive statements/values that dictate who to be (because the only criteria for living well was living in congruence with your Being), but he did pinpoint four “characteristics” that equipped an individual to fulfill his or her tendency to actualize.

1. **Openness to experience.** Rogers explained this to be the “opposite of defensiveness” the evidence of our senses doesn’t match our picture of self, we don’t distort the evidence; we take in the evidence as it is.

2. **Trust in one’s organism.** Being open to experience allows us to find an increasing trustworthiness in ourselves—a feeling that we are our own best instrument for discovering the most satisfying behavior in each situation.

3. **Internal locus of evaluation.** We look to ourselves for approval, less and less do we look to others for standards to live by. We also see ourselves as being ultimately in control of our selves—a powerful and frightening realization.

4. **Willingness to be a process.** We are more content being a process rather than a product. As described through one of Rogers’ clients: “It seems to mean letting my experiences carry me on, in a direction which appears to be forward, towards goals that I can but dimly define.”

	<i>What is a human?</i>	<i>What is Being?</i>	<i>How can we live a good life?</i>
Humanistic Psychology / Rogers	An unmasked person. "Not a façade of conformity to others, a living, breathing, feeling... person"	<b>The Actualizing Tendency</b> "The process of maintaining and moving a Self towards its full potential"	<b>Four characteristics of a fully functioning person</b> <ol style="list-style-type: none"> <li>1. Openness to experience</li> <li>2. Trust in one's organism</li> <li>3. Internal locus of evaluation</li> <li>4. Willingness to be a process</li> </ol>

### **Maslow's Hierarchy of Needs (1943, 1954, 1970, 1987)**

Carl Rogers' friend and co-leader of the Humanistic Psychology movement was Abraham Maslow, who provided our the most comprehensive and widely-accepted human nature framework in existence today, his Hierarchy of Needs, one of the only pieces of Humanistic Psychology that has stood the test of time and that continues to have acceptance today.

Like the Phenomenologists and Existentialists, Maslow believed that "all that is needed for science to be a help in positive human fulfillment is an enlarging and deepening of the conception of its nature, its goal and its methods" [17]. He was staunchly against the reductionist tactics of Behaviorism.

Maslow believed that a human could never be understood through our maladies, pitfalls, and destruction; the human has to be understood through its highest aspirations and hopes.

*"When we talk about the needs of human beings, we talk about the essence of their lives. How could I have thought that this essence could be put to the test in some animal laboratory or some test tube situation? Obviously, it needs a life situation of the total human being in his social environment. This is where confirmation or disconfirmation will come from" [20].*

With this ethos, Maslow led a profoundly positive and life-loving movement. (Maslow joked that the sick side of psychology was provided by Freud and that this Humanistic Psychology supplied the positive side.)

*“Human life will never be understood unless its highest aspirations are taken into account” [17].*

In his forty years of publications, Abraham Maslow continually sought a new image of man and of society, one that would help guide and inspire, a “life philosophy.” He saw psychology’s role not just as academic, but as a way to “generate a way of life.” And he was motivated by what he considered collapse of all value sources outside the individual: Nietzsche had declared God to be dead, and the Americans had “learned that democracy and economic prosperity don’t in themselves solve any of the basic value problems” [19]. Maslow saw the Self, turning inward, as only locus of our values and a good life.

- **A human** = an actuality & a potentiality

Pulling from Existentialism, Maslow saw a human as both an actuality and a potentiality, possessing an inherent “twofold” nature. At its core, a human is both of these things, revealing a predicament of being: there is a difference between human aspirations and human limitation (what the human being is and what he would like to be/could be) [17]. He believed that the future of psychology should be based on addressing that concern and bringing forth a “unity, integration or synergy within the person” [17].

*“Even our most fully-human beings are not exempted from the basic human predicament, of being simultaneously merely-creaturely and godlike, strong and weak, limited and unlimited, merely-animal and animal-transcending, adult and child, Fearful*



*and courageous, progressing and regressing, yearning for perfection and yet afraid of it.*

Maslow also believed the human self is inherently linked to his/her most preeminent and dominant needs. For example, if a human is lacking food, the human “would most probably hunger for food more strongly than for anything else” [19]. and would devote the entirety of its organism—all intelligence, memory, habits—towards hunger gratification. When unsatisfied, a need dominates the organism—until it becomes satisfied and then becomes unimportant in the individual.

- **Being** = the ongoing actualization of self

Being, for Maslow, is living in an ongoing process of realizing your potentials, capacities and talents—with seriousness and grandeur—“as if it is a fulfillment of mission [or call, fate, destiny, or vocation]” [17]. In doing so, a person’s understanding of their own nature becomes fuller and more vibrant and he/she experiences inner integration of the actuality of Self and potentiality of Self.

Maslow also illustrated that Being and the drive to self-actualize Self is powered by a ‘currently active future’. Like a gravitational force, pulling your journey forward, the *currently active future* lives within every human, and draws the human’s self-actualization journey forward. This is where, according to Maslow, hoping, wishing, and dreaming come from. The undefinable active future, billowing on the horizon and drawing life forward. Maslow explained that, “I think it is fair to say that no theory of psychology will ever be complete which does not centrally incorporate the concept that man has his future within him, dynamically active at this present moment” [17]. Though, he recognized, the future is entirely unknown and unknowable,

and that only a “flexibly creative person can really manage future, only the one who can face novelty with confidence and without fear” [17].

Maslow originally published his concept of Self-actualization in a 1943 paper and then more formally in 1954 in his first edition of *Theory & Motivation*. Self-Actualization was depicted as the ultimate state of Being, but through Maslow’s study of people’s peak experiences in life (moments of extreme beauty and inexplicable importance), he added another category of Being called ‘Self-Transcendence’ in a speech in 1972, though he explained the theory of it in his 1968 ‘Towards a Psychology of Being’. Maslow’s belief was that self-transcendence occurs through self-actualization when a human has reached such a fulness of Self that he/she actually escapes his or her individual identity: [31].

*“ As he gets to be more purely and singly himself he is more able to fuse with the world, with what was formerly not-self, e.g. the lovers come closer to forming a unit rather than two people. The creator becomes one with his work being created, the mother feels one with her child, the appreciator becomes the music.” That is the greatest attainment of identity, autonomy, or selfhood is itself simultaneously a transcending of itself, a going beyond and above selfhood” [17].*

This addition is not recognized in the well-known and adopted version of his Hierarchy of Needs, but he made this definitive addition and admitted to unintentionally merging the concept of self-transcendence and self-actualization in his earlier works.

- **Living a good life** = fulfillment of the Hierarchy of Needs

Maslow’s first introduction to his now famous Hierarchy of Needs was in 1954 in his first edition of *Personality & Motivation*. In a relatively brief overview, he explained the pyramid framework that is now taught in every Psychology 101 class and that you are no doubt familiar with.

<i>Physiological needs</i>	<i>Safety</i>	<i>Love/belonging</i>	<i>Esteem</i>	<i>Self-actualization</i>
Anything needed to preserve homeostasis and survive (food, shelter, water, air)	Humans need a "safe, orderly and predictable world that he can count on," and in which he/she is free from danger. Maslow used the example of a child who is slowly exploring the world beyond his mother's lap. With time, the child will start to explore farther and farther away from the mom, each step, the safety of the world is questioned.	Humans need affectionate relationships and a place in the group. This love and belonging has to be two-way, a give and take, not one-directional.	Humans need a "stable, firmly based high evaluation of self. This comes from two factors: 1) an internal self-respect and 2) from reputation and prestige (the esteem from others). Maslow makes the important distinction that esteem must come "out of one's Real Self rather than out of the idealized pseudo self"	The final step in Maslow's original Hierarchy of Needs is self-actualization, which he describes as: "a musician must make music, an artist must paint, a poet must write, if he is to be ultimately happy. What a man can be, he must be." Without this, the human will develop a new discontent and restlessness.

While the original model of the Hierarchy of Needs is the framework we are all most familiar, in the two decades following it's initial publishing, Maslow made a few important distinctions that are paramount to understand.

In 1962, Maslow published 'Towards a Psychology of Being' in which he thoroughly detailed the difference between D-needs and G-needs. D-needs or "deficiency needs" could be thought of as the basic needs a human requires and that the absence of breeds illness and neurosis. (e.g. not having love/belonging has a serious effect on the psyche of an individual). Maslow illustrated the D-needs as "empty holes so to speak, which must be filled up for health's sake" and which rely on the cooperation and help from other individuals. He gave this example:

*“it would not occur to anyone to question the statement that we ‘need’ iodine or Vitamin C. I remind you that the evidence is that we ‘need’ love is exactly the same type” (p.28).* In his original hierarchy of needs, D-needs includes: Physiological needs, Safety, Love/Belonging, and Esteem.

These deficiency needs were in contrast to what Maslow termed G-needs or “growth needs” (self-actualization) which are needs that fulfill a state of being and development of Self. While D-needs fulfilling D-needs caused them to go away, contrarily, fulfilling G-needs causes them to grow bigger and hungrier (e.g. learning). And G-needs cannot be fulfilled by individuals like D-needs can; G-needs are fulfilled by the Self, and “in the larger stages of growth, the person is essentially alone and can rely only upon himself.” (p. 42) Maslow saw these two categories of needs as existing in direct relationships, leading to one another and pushing and pulling on each other.

Another important distinction occurred in 1971, in book titled ‘Farther Reaches of Human Nature’. I mentioned this shift earlier while describing Maslow’s definition of Being: the addition of self-transcendence to the *Hierarchy of Needs*. This construct went was a state reached through self-actualization where an individual began Being in orientation beyond him/herself. (i.e. two lovers feeling so connected that they cannot see the difference between one and another.)

Finally, in 1987, Maslow published his 3<sup>rd</sup> edition of *Motivation and Personality* in which he made a drastic change to the structure of the Hierarchy of Needs. In this text he minimized the importance of the prepotency of certain needs. In the initial Hierarchy Maslow highlighted a progressive relationship showing a scale of importance from needs and implying a general

dynamic: that one would have to be achieved before the next. However, in his 3<sup>rd</sup> edition, he clarified that the satisfaction of these needs is not an “all-or-none” phenomenon, admitting that his statements “may have given the false impression that a need must be satisfied 100 percent before the next need emerges.” (p. 69). He also explained that most behavior is multi-motivated and that “any behavior tends to be determined by several or all of the basic needs simultaneously rather than by only one of them” [20].

	<i>What is a human?</i>	<i>What is Being?</i>	<i>How can we live a good life?</i>
Humanistic Psychology / Maslow	An actuality + a potentiality	Living in a state of self-actualization	<b>Hierarchy of Needs</b> <ol style="list-style-type: none"> <li>1. Physiological health</li> <li>2. Safety</li> <li>3. Love/belonging</li> <li>4. Esteem</li> <li>5. Self-actualization</li> <li>6. Self-transcendence</li> </ol>

### Positive Psychology (1998)

The final paradigm I will review is Positive Psychology, which began in 1998 when Martin Seligman began his term as president of the American Psychological Association and he chose Positive Psychology as his focus area. Positive Psychology is the study of happiness, and it builds on Humanistic Psychology and its phenomenological roots. Positive Psychology concerns itself with the ordinary individual and explores the positive aspects of life: how we can be happier and more fulfilled. [21].

- **A human** = undefined
- **Being** = a state of happiness

- **Living a good life = PERMA**

Seligman spent years developing a theory of well-being called the PERMA model. The model includes the 5 elements that create a foundation for a flourishing life:

<i>(P)ositive emotions</i>	<i>(E)ngagement</i>	<i>(R)elationships</i>	<i>(M)eaning</i>	<i>(A)ccomplishments</i>
This is the ability to be optimistic and view the past, present, and future in positive perspective.	Finding activities that require our full engagement, which is best embodied through the concept of 'flow', a state of optimal well-being where we are "completely absorbed in a task that slightly exceeds our skill level, and therefore, require us to stretch to a new level of performance.	Resisting isolation and building relationships to share love and joy.	Having a reason for why you are on the planet.	Achieving our goals helps give us a satisfaction, reward and motivation to continue achieving.

## The PERMA Model

- P - Positive Emotion.** Feeling good, positive emotions, optimism, pleasure and enjoyment.
- E - Engagement.** Fulfilling work, interesting hobbies, "flow."
- R - Relationships.** Social connections, love, intimacy, emotional and physical interaction.
- M - Meaning.** Having a purpose, finding a meaning in life.
- A - Accomplishments.** Ambition, realistic goals, important achievements, pride in yourself.

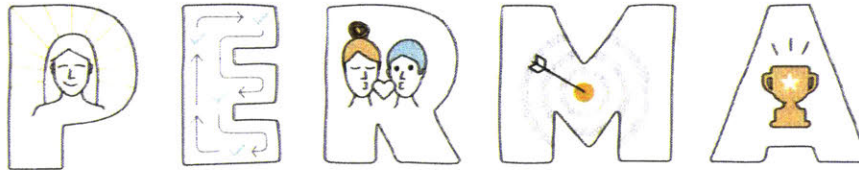


Figure 3. PERMA Model, Positive Psychology Program

I'm not going to go into more detail about Positive Psychology, but I included it here to show how the phenomenologically-based thinking of Existentialism and Humanistic Psychology did not go extinct and that it is still alive in modern Psychology. The factors in the PERMA model are directly relatable to the needs outlined in Maslow's Hierarchy.

	<i>What is a human?</i>	<i>What is Being?</i>	<i>How can we live a good life?</i>
Positive Psychology / Seligman	Undefined	Being happy	<b>PERMA</b> <ol style="list-style-type: none"> <li>1. Positive emotion</li> <li>2. Engagement</li> <li>3. Relationships</li> <li>4. Meaning</li> <li>5. Achievement</li> </ol>

## Chapter 3: A New Proposed Framework | The Periodic Table of Human Elements

Even in this modest literature review, you can see the diversity and inconclusiveness of human nature frameworks that exists today.

### Selection of paradigm

As a reminder, at a midpoint in this paper, the ultimate goal that inspired our search for an usable human nature framework is a need *to design for a user in the context of his/her whole humanness (i.e. "Whole Human Design)*. With that in mind, the selection of a framework becomes fairly obvious.

Behaviorism can be immediately eliminated because, while it maintains utmost empirical validity, it fails to provide a description of the human being that is remotely vivid or worth designing for. On the other end of the spectrum, Religion, and the territory of the Absolutes, while powerful, relies far too heavily on dogma in place of data and can become immediately divisive. This leaves the phenomenologically-based frameworks (Actualizing Tendency, Hierarchy of Needs, PERMA) as the best options.

While I pulled inspiration from all three of these frameworks, I used Maslow's 1971 updated Hierarchy of Needs (with the inclusion of self-transcendence) as the anchoring theoretical structure for Whole Human Design. (i.e. the human is best understood through Maslow's six core needs: Physiological needs, Safety, Love/Belonging, Esteem, Self Actualization, Self Transcendence.) I made this decision after finding a paper entitled, 'Needs and Subjective Well-Being Around the World' [22] that sampled 123 countries to examine the

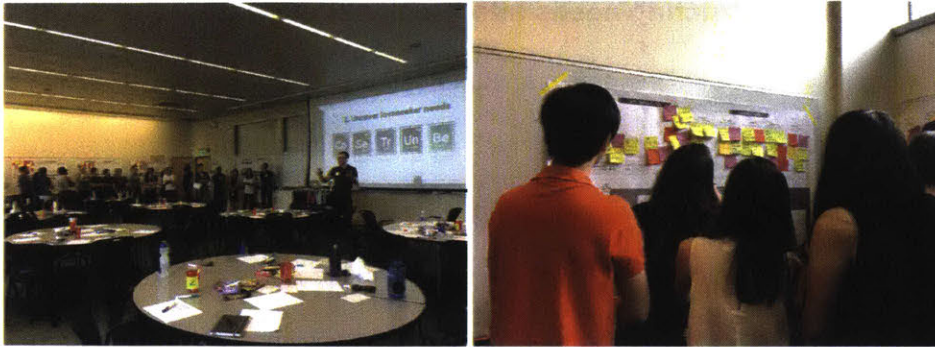


association of Maslow's Needs and human subjective well-being. The study found "evidence of universality and also substantial independence in the effects of the needs on subjective well-being." Furthermore, it agreed with Maslow's 1987 deemphasis of the hierarchical nature of needs, the study found that "the order in which they are achieved does not strongly influence their effects on subjective well-being."

### **Designing a supportive framework**

Even with Maslow's core needs as the anchoring ontological structure, there's still gap that we have to solve in order to achieve the goals of Whole Human Design. The purpose of a design framework is to serve as an effective springboard for ideation and concept development. While Maslow's core needs are the right framework for understanding a human, the core needs alone are not specific enough to make that a natural and easy process.

At this point, I tested Maslow's ability to be used as a framework for design in a workshop with 117 first-year MBA students at MIT Sloan. My hypothesis was that using the framework would help expand the novelty and potential impact behind the ideas that the participants (who all had a relatively low amount of design experience) came up with. They were given a client (Tinder) and a prompt, ("How can we improve the experience of loveseeking?") and they were given a canvas with Maslow's Core Needs from which they brainstormed in groups of 4-5. (E.g. "How can we improve 'Esteem' throughout the process of Loveseeeking?")



Figures 4 & 5. Whole Human Design Test. August 2017.

What was immediately noticeable was the power of Whole Human Design to expand the novelty and potential life impact of ideas. I could imagine the had we just asked participants to re-envision the Tinder experience and presented user needs, they would have come up with a variety of enhancements to the current service. Contrarily, groups came up with ideas like an augmented reality simulator that would allow you to go on a “pre-date” with the prospective partner, affording you more safety/control through the process of loveseeeking.

While there seemed be a latent power and new energy in designing for the Whole Human rather than the user alone, I could also feel the mental strain given the high altitude of Maslow’s core needs. In fact, it took most teams 1-2 rounds (out of the total 5) to fully understand how to brainstorm in this abstract manner. From this experience, I got the sense that we were on the right track but that Maslow’s core needs alone are too unsupportive to be a true framework for Design. We would need to develop a more specific foundation to assist in designing for the Whole human, so I began to explore how each of Maslow’s needs could deconstruct into a more specific and actionable level to design from.

## **Deconstructing needs into 'Human Elements'**

In Maslow's published works, he points at numerous factors that go into achieving a core need. For example, he explains how safety is formed over time, little by little, in gained trust, and he gives the example of a baby slowly venturing out, away from a mother's lap—increasing his/her distance, little by little, until he/she developed a trust in the predictability of the world. These descriptions shed light on more actionable criteria that goes into achieving (and designing for) a core need. So, for each of the core needs, I compiled the factors that Maslow describes that help build towards the fulfillment of that need. I did this for all of his core needs as a starting point. These factors are obviously not fully comprehensive, but I could immediately imagine this level being much more productive in an ideation. (e.g. he also cites that routine is an important factor in fulfilling one's safety need. Instead of designing for 'safety', Designers would design for 'establishing a routine').

I began calling these factors 'Human Elements', defined as the elements of life that help humans fulfill their core needs and thrive. I see these Human Elements as the building blocks of our core needs as human beings, and as I mentioned, they are not all encompassing as a need can be filled in many ways; they are common factors that contribute to the fulfillment of that need. Again, I used Maslow and Carl Rogers' descriptions as a starting point, and to further examine the Human Elements and add depth to these factors, I began a qualitative study with 50 individuals.

## Methodology

I recruited 50 participants to participate in an hour-long interview, using phenomenological interviewing techniques. These individuals were recruited through friends, online forums, and natural word of mouth of the project. I specifically targeted forums dedicated to activities or life stages that I thought would have expert or extreme experience. (E.g. the 'Community of Single People' and an Ultramarathoner group). I did this because I was hoping to recruit participants who had particularly salient stories in their success or struggle to develop one of the core human needs. In the end, I learned that this did not matter as, logically, every human is concerned with his/her entire well-being, not just one aspect. In fact, it was common that an individual I recruited from one category ended up being primarily focused on another.

Participants signed up through a website devoted to the study that asked individuals to "donate their story" to an 'MIT study on human nature.' In signing up for an available time slot, they also filled out a survey with the following questions:

- **Name**
- **Age**
- **Race**
  
- **Subjective well-being** (Please rank your life on a scale from 1 to 10 (1 = least desirable life, 10 = most desirable life))
  
- **Objective well-being** Which of the following feelings did you experience significantly yesterday? (select all that apply)
  - Joy / smile / laugh
  - Enjoyment
  - Worry
  - Sadness
  - Depression
  - Anger
  
- **Objective well-being** Which of the following did you have in the past year of your life? (select all that apply)
  - Enough money for food

- Enough money for shelter
- The feeling of safety walking home alone
- A theft of personal belongings
- The experience of love
- Others who you can count on for help in an emergency
- Respectful treatment
- Pride in something
- The experience of learning something new
- The feeling of doing what your best at
- The ability to choose how your time is spent
- Freedom in life

These questions helped ensure that we were recruiting a representative mix of individuals experiencing high and low well-being.

#### Interview prompt

A one-hour long interview was conducted over the phone with each participant at the time selected by the participant. We started the interview with a very brief introduction and then asked every participant the same question:

*What was the last chapter that closed in your life?*

The entirety of the interview focused on uncovering the details of that transition:

- I asked participants to give the old chapter a name and describe life during that period.
- Then I asked participants to explain the the transition from the last chapter to the new chapter.
- Finally, I asked participants to explain their life now, in the new chapter.

At first I felt a bit wary of this question and I wondered if people would get it, but I selected it because it felt like a good way to understand an individual's life trajectory (are they moving in a positive direction or negative direction) and to understand the factors (Human Elements) that were leading to that advancement or degradation of well-being. For the first few interviews I was a bit hesitant with the question and told people to "take all the time you need" to

think about it, but what immediately struck me was how intuitive this question felt and how participants immediately had an answer. In most cases, the participant would chuckle a little knowingly or would say something like “oh, I have a good one for this.” Interestingly, it felt like participants were so hungry for a question like this in their lives, as if they were waiting to explore this territory. They often jumped in without hesitation, and sixty minutes later, it was a bit heartbreaking to stop them in the middle of a conversation that we could have enjoyed for hours more. The question ended up being a marvelous way to discuss his/her Being journey, and I am grateful for its power.

In true phenomenological fashion, I used the bracketing method to help participants isolate the root cause behind their statements and make sense of topics that are hard to describe.

### Analysis

In order to analyze the content from our 50 interviews, we recorded, transcribed, and coded our qualitative data based on Maslow's six core needs. For example, if someone had just gone through a break-up, and they cited the pain in losing the shared identity that they had built with another person, we coded that as 'esteem'. At the end of this exercise, all of our data had been sorted into one of Maslow's six needs, helping to illuminate that need and explain the experience of our individuals in seeking or struggling with that need.

# ESTEEM

Trust in your worth	
Theory of motivation, 1943	- Satisfaction of the self-esteem need leads to feelings of self-confidence, worth, strength, capability and adequacy of being useful and necessary in the world.
Break-up research	<ul style="list-style-type: none"> <li>- The break-up often unearths many personal flaws. It's handed emotionally and not delicately. They're made to feel like their personal flaws are the reason it didn't work. It doesn't matter if you're the dumper or the dumped, you question yourself. (You feel fat/not hot, bad at relationships or like you have terrible judgment)</li> <li>- "A bunch of what I was feeling was really guilty and upset with myself for not giving him more time. He had made me feel like a pretty bad person." (40:34)</li> <li>- "She was totally in love, and I kind of crushed her, and that sucked." (45:28) "I definitely could have told her sooner, to give her time to heal, but I was too afraid to hurt her. The majority of the guilt came from making her so upset." (47:56)</li> <li>- "He would say terrible things to me... basically we're not having sex because you're overweight and not attractive. You should go lose 50 pounds. I felt like absolute shit." (28:34)</li> <li>- "I had been emotional abuse, and I was depressed." (25:29)</li> <li>- "I felt guilty for cheating, I felt badly about it. I was still in this broken damaged good state." (41:20)</li> <li>- "I'm smart, and saw this coming. Why didn't I do anything? I knew that this was the case. I felt duped." (58:05)</li> <li>- "What does it say about my judgement that I didn't listen to myself?" (59:00)</li> <li>- "I put 12 years into this thing, and I just threw it out the window." (1:11:12)</li> <li>- "Am I unlovable?"</li> <li>- "I feel a little nervous when I'm dating. I don't trust myself to be able to recognize something that's good for me or not" (35:13)</li> <li>- "It's super disorienting and unanchoring to feel like you can't trust yourself" (36:42)</li> <li>- "It just sucks not to be loved by someone you love. It causes you to date your general love-ability" (38:53)</li> </ul>
Motivation and Personality, 2nd edition (1970)	<ul style="list-style-type: none"> <li>- We have been learning more and more of the dangers of basing self-esteem on the opinions of others rather than on real capacity, competence, and adequacy to the task. The most stable and therefore most healthy self-esteem is based on deserved respect from others rather than on external fame or celebrity and unwarranted adulation. Even here it is helpful to distinguish the actual competence and achievement that is based on sheer will power, determination and responsibility, from that which comes naturally and easily out of one's own true inner nature, one's constitution, one's biological fate or destiny, or as Horney puts it, out of one's Real Self rather than out of the delusional pseudo-self ( 20,46)</li> </ul>
Trapped by a feeling of uselessness (reason to exist in the world)	
Respondent A	<ul style="list-style-type: none"> <li>- After talking through it a bit, Ariella settled on when she QUIT HER LAST JOB AFTER 1 WEEK. This was about a month and a half ago...at the end of the year. It was important to her because after a couple years of "bad decisions" she feels like this was her chance to get on a better path.</li> <li>- She was in a bad job</li> </ul>
Respondent K	"There's no point to being a teacher if there is no one to learn. I'm really good at being a teacher, and this is a way for me to step in and do it."
Respondent B	Library, softball, neighbors "These communities are gifts of sobriety. They make me feel like I'm somebody. Alcohol makes me inhuman. I would be a shut in if I were still drinking. Library, softball, neighbors "They asked me to make pancakes the other day. It makes me feel like a positive member of society."
Respondent M	Chi Alpha Yeah, I feel valued now in a smaller group because people are invested in me. I invested in a couple of ways. I went to a lot of social mixers and I would make friends and slowly developing friendships was my way of investing in those people and I acted as MC for a lot of events in that group. I personally think I'm kinda an oddball in Chi Alpha. I'm one of 2 indian people in the community and I think I offer a kind of diversity to that community. The community will help me, but I can also give something to it. Like I don't consider the classroom a community because the 2-wayness kinda gives you something. You feel like you're giving something back.
Respondent Y	Before his breakdown. He was also making really good money, saving and enjoying a certain lifestyle, and that made him feel successful. His self worth came from that and from being able to support his mom and dad. He noted that these were extrinsic motivations. This gave him purpose because his parents had moved to America for him. They took a lesser quality of life (and they still work 7 days a week) because he wanted to stay in America as a child, and they figured it would be a better life for. Then, he stopped

Figure 6. Example of analysis from qualitative study.

From there, once that initial sorting was complete, we looked within each category and we clustered like sub needs within that core need. For example, within the self-actualization category, nine participants talked about their well-being as coming from feeling like that had the ability to “design their life.” These were grouped into a category that we eventually titled ‘self design’. These sub categories of sorted thoughts ended up forming the human elements.

## Introducing the 'Periodic Table of Human Elements'

### The Periodic Table of Human Elements



Figure 7. Periodic Table of Human Elements.

From there, we had pinpointed specific sub needs that were common in the fulfillment of that core need. This resulted in the birth of the Periodic Table of Human Elements, based in Maslow's hierarchy of needs and livened through the stories of heartbreak, triumph and excitement of our fifty participants. The framework structured as a Periodic Table for two reasons: first, because Maslow deemphasized the hierarchical nature of his Hierarchy of Needs and, secondly, an contrary alternative to the atomistic/reductionist approach of science to reduce humans to atomic elements. It shows that we can understand the complexity and beauty



of the Human through *Human Elements* (needs) instead of the natural elements (atoms). Let me introduce the structure and dynamics of this model.

Level 1: Needs

The Periodic Table of Human Elements

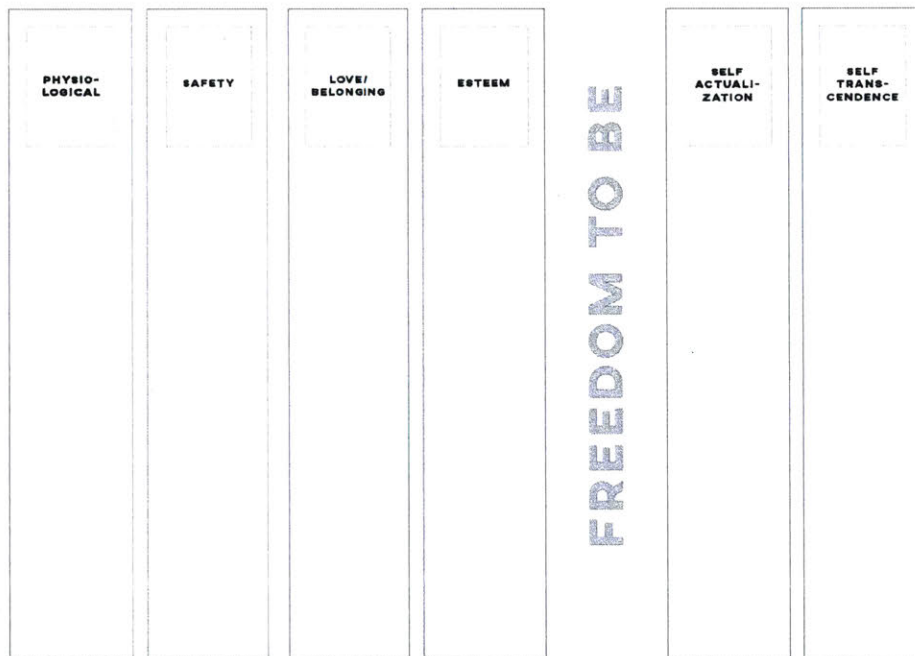


Figure 8. The Periodic Table of Human Elements.

The six columns in the *Periodic Table of Human Elements* are Maslow's core human needs, the universal factors we seek as human beings (physiological needs, safety, love/belonging, esteem, self-actualization and the 1971 addition of self-transcendence). When defining a need, Maslow makes an important distinction that these needs are not the same thing as behavior and that the model does not attempt to predict behavior. Maslow was vehemently

against the reduction of a human's actions to singular environmental elements; instead, he believed that all behavior was motivated by cultural, situational and biological elements and that behavior is a channel through "which many basic needs are satisfied" [19].

Level 2: Human Elements

The Periodic Table of Human Elements

PHYSIO-LOGICAL	SAFETY	LOVE/BELONGING	ESTEEM		SELF ACTUALI-ZATION	SELF TRANS-CENDENCE
01	02	05	09	FREEDOM TO BE	14	19
	03	06	10		15	20
	04	07	11		16	21
		08	12		17	
			13		18	

Figure 9. The Periodic Table of Human Elements.

As we discussed already, the purpose of our qualitative study was to deconstruct the six core needs into their 'Human Elements', the building blocks the lead to achieving that need. Again, this list of Human Elements is not fully comprehensive but it should serve its twofold

purpose: to give body and definition to the relatively abstract concept of a core need and to make each core design actionable. These were the Elements that were most evident through our research and through the publications of Maslow and Rogers, but I imagine that it will be a life's work to continue clarifying and adding to the roster.

## Dynamics

The Periodic Table of Human Elements

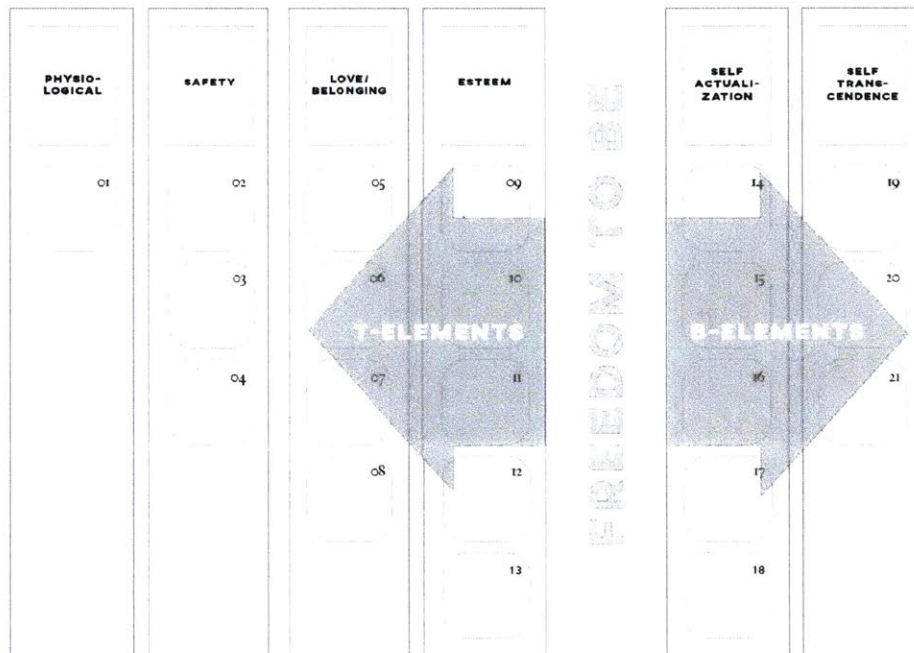


Figure 10. The Periodic Table of Human Elements.

The primary division in the Periodic Table is the vertical dividing line between what Maslow calls D-needs and the G-needs. The mere 100 pixels looks like a thin differentiation, but a human on the left of that partition is vividly unlike a human who lives on the right, and by the

end of an hour-long interview with an individual there was no dispute real dispute on which side he/she existed.

I'll describe what we found to be the common characteristics of individuals' who live on either side of that dividing line, but it's first important to understand what the partition is actually partitioning. We have come to know that line as separating whether or not an individual has the 'Freedom to Be', or to use the Existentialist definition of Being:

*does the individual have the freedom to take hold of his/her life and actively create his/her Self?*

Those to left of that line are best described as "trapped" by some kind of need deficiency, (be it physiological, safety, love & belonging, or esteem) which creates a hole in the Self, like a puncture in a balloon, and that prevents it from becoming airborne. This deficiency prevents the human from fully imagining the possibilities of his/her future Self, his/her potential and from moving him/her Self in that direction. For example, one of our participants, a male in his early thirties, severely injured his back and could barely walk or even go to the bathroom alone. This hole in his need for Safety consumed him and ultimately made him feel like his spirit was "thrown in an ice cold lake." He also described feeling as though he was "an empty shell...not knowing why I was getting out of bed." His Self was trapped and kept from evolving.

Achieving freedom from these entrapments allows the individual to pass through this divide and focus on what he/she could be. In short, the individual enters a state of 'Being' where he/she begins to possess a 'currently active future', a hope, wishing and a playfulness. This differentiation characterizes the elements on the left and right of the partition. We'll call elements on the left hand side, "T-Elements" (for trapped) or elements that, if missing, create an isolated,

weak, distant, threatened Self, “trapped” from Freedom to Be. And conversely, we will call elements on the right of the framework, “b-elements” (for being) or elements, that if present, add vividness, strength, and union, reinforcing the Self’s freedom.

It’s also important to note that this transition is not always due to blessings and positive experiences, in fact, it seems that, more often than not the ‘freeing’ from a t-element comes through a difficult experience. For example, one of our participants achieved a ‘Freedom to Be’ after going through a devastating divorce. As painful as it was, it ultimately allowed her to untrap herself from her ex’s restrictive rules for her, who continuously told her that she had a “lack of discipline,” and the feeling that she had to “mirror him.” She described her newfound ‘Freedom to Be’ through a memorable sentence: “now I can wear a shoe on my head if I want!”

The difference of a human whose Self is trapped versus one who lives in a state of Self creation is best illustrated through four factors.

Vividness of life

<i>Life in black and white</i>	<i>Life in technicolor</i>
<p>Being trapped has a sterilizing effect on the vividness of life and extinguishes of inner light. Many of these individuals expressed that it was, “hard to get out of bed in the morning.” and a talked about a looming feeling of despair.</p> <p>One individual described it as, “<i>I had a perpetual sense of fear....deep sorrow, a physical pain that wouldn't go away.</i>”</p> <p>Another reflected back on his experience of being trapped as: “<i>it felt like all the candles of</i></p>	<p>One individual who had recently achieved a ‘Freedom to Be’ by quitting her all-consuming job explained the transition as: “<i>life changed from black to multi-color.</i>”</p> <p>Many individuals also told me about magical experiences where they felt moments of beauty, like the world had vivid depth.</p> <p>They were more likely to talk about moments of synchronicity and beauty that occurred in their daily lives. For example, one woman was walking on the street and she smelled a</p>

<i>hope had been blown out inside me."</i>	beautiful flower that she was named after. She described this moment as: "the world opening itself and saying 'yes'."
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Activeness of Self

<i>Along for the ride</i>	<i>"Designing my life"</i>
<p>Trapped individuals seemed to explain life as though they were in passenger seat, along for the ride.</p> <p>One individual described his low as working for as a consultant and being in a cold airBNB in the middle of nowhere: <i>"I just didn't want to be there. I felt it so strongly that I broke out in hives."</i></p>	<p>A surprising number of these individuals expressed that they feel as though they get to "design their life."</p> <p>This occurred in all ways: from starting to wear hawaiian shirts as a new expression of personal style to starting brand new hobbies. Overall, these individuals felt like they were crafting the experience they were living.</p>

Relationship with the future & hope

<i>Closed &amp; Wary</i>	<i>Open &amp; Confident</i>
<p>Trapped individuals expressed a desire for life to stay the same or for a specific outcome to occur in the future. Or, worse, a full apathy towards the future.</p> <p>For example:</p> <p>"I kinda hope it will be similar to what it is right now. I feel like I have gotten through so much change. Day to day life. being similar to where I'm at."</p>	<p>Free individuals tended to be far more open to whatever scenarios the future may bring. For example, when asked "what do you hope for in the next six months?" here were some of the typical responses:</p> <p><i>"I don't really care. know I'm going to be happy no matter what. With whatever. I'd be the same happy with broke vs. a billion."</i></p> <p><i>"My life could be immeasurably different in three months, and I'm not going to borrow trouble."</i></p> <p><i>"I don't really have a specific future in mind."</i></p>

	<i>Just to keep growing"</i>
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Trajectory

Holistically downward	Holistically upward
<p>For trapped individuals, difficult parts of life tended to compound and pile up on-top of each other. Even if the individual was resilient, life still feels like the negative weights outweigh the positive lifts.</p> <p>For example, for an individual whose sense of Safety was punctured by her brother's mental health issues: <i>"It all piled up. I didn't know what I was doing at work, I didn't ever have the energy to swim or workout, everything my boyfriend said annoyed me, I didn't even pack my lunch anymore."</i></p>	<p>Conversely, for free individuals, the good seems to compound and exponentially improve life. Even if a negative thing happens, it seems to quickly resolve or bounce off of their upward trajectory.</p> <p>For example, for an individual who had recently quit her job and devoted two months to self help, she described her life as: <i>"I feel overall stronger now stronger now. I don't get sick, my friends come to me for my help more, I notice myself smiling and laughing more, and I know so much more about social justice."</i></p>

What was also clear through our research was that the location of an individual—on either side of the 'Periodic Table of Human Elements' was not static. Most individuals answered the main interview question: " what was the last chapter that closed in your life?" by describing an experience of moving from a state of 'trapped' in an old chapter to being 'free' in a new chapter.

In evaluating the experience of traversing this divide and gaining 'Freedom to Be', it became clear that two things have to happen. The first is that the individual has to be untrapped from the factor that is holding their Self back. Whatever is causing the hole in the balloon (the missing d-need) *has* to be patched. Initially, we had imagined that that factor would be enough, but through our analysis, we realized that the being untrapped may make you technically 'free',

but it doesn't mean you have entered into a state of self-actualization/Being. You have to take steps to act on your Freedom and stretch the Self accordingly. This requires the addition of b-elements, described below as a 'catalyst for self actualization'.

Here are some examples of the entrapments, freeing factors, and catalysts to evolve that we ran into.

Trapped by...	Freeing factor	Catalyst for Self Actualization
Restrictive expectations of the suburban neighborhood	Moving to the city and getting away from the manicured lawns and phony standards	Starting to walk to work which eventually developed into an ultramarathoning hobby.
A restrictive husband who made her feel like she was incompetent.	He broke up with her	Going on a biking trip in New Zealand that she never thought she could have done by herself. She also started teaching, something he never allowed her to do.
A restrictive job that had her travel every single day of the week	She quit her job and gained an enormous amount of free time	She began studying social justice and could feel her knowledge expanding and her views changing.



# The Human Elements

We ultimately surfaced 21 human elements that I will describe in the following pages.

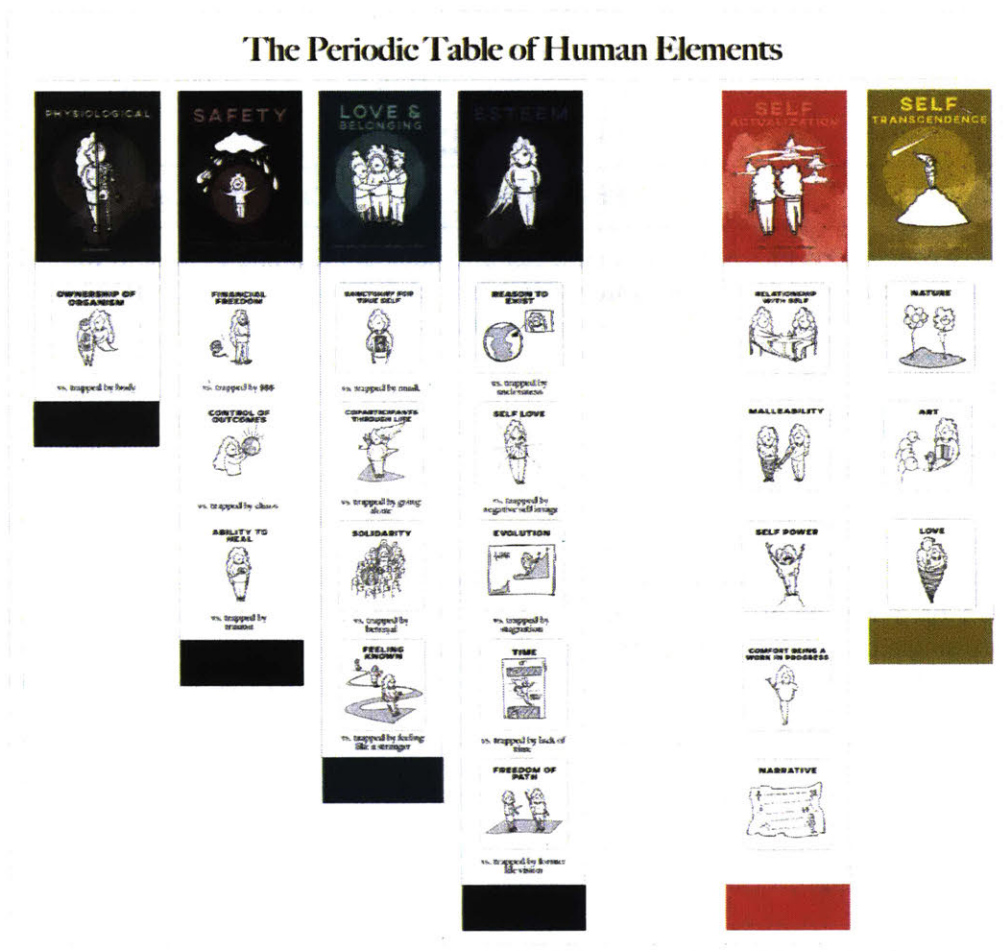


Figure 12. Periodic Table of Human Elements.

# PHYSIOLOGICAL



Homeostasis

## Physiological needs

Out of all the core needs, Maslow gives the least description to the Physiological needs because they are the most somatically localizable and understandable out of all his core needs. Though he notes a number of exceptions, he ends up classifying these needs as the body's natural drive to maintain homeostasis, the body's "automatic efforts to maintain a constant, normal state of the blood stream" [17]. Ultimately, Maslow talks about food, water, warmth, sleep, sex. We found one Human Element in this category through our study.



**(vs. trapped by body)**

When an individual doesn't have ownership of their organism, they become prisoners to their bodies and medical conditions. We saw this most commonly through individuals who had chronic, life-warping conditions. For these individuals, they lived in a state of continuous appeasement to and oppression by their condition. COPD patients wouldn't go outside when the

humidity was above a certain level, individuals with pain wouldn't leave the house because they couldn't afford to be away from their bed and individuals with mental issues could no longer go to work or drive a car. For these types of humans, a "good day" is simple: a day where their lives are not dominated by their bodies. As characterized woman with gastrointestinal and mental health issues:

*"It's not the best life. It doesn't feel fair. My boyfriend is the same age as me, and he gets to live a normal life. I feel like I got jipped."*

The effect that a lack of 'ownership of organism' has on the Self is clear: it no longer possesses the ability to be more than its condition. Without 'ownership of organism' the individual is quite literally trapped (physically and emotionally).

This element was most clear through a number of individuals we spoke with that had a complete physiological deficiency, but I could imagine a similar (though lesser) effect by something like a broken leg or a propensity for migraines.

# SAFETY



A sense of security in the face of an unpredictable world

## Safety

A sense of security in the face of an unpredictable world

Safety is the second of Maslow's core needs, one of our most primordial of needs, which he defines as a "predictable and orderly world" [19]. Maslow uses the analogy of a toddler venturing away from his/her mother's lap to illustrate our relationship with safety in an unpredictable world:

*"Characteristically, [the toddler] first clings to his mother as he explores the room with his eyes. Then he dares a little excursion, continually reassuring himself that the mother-security is in-tact. These excursions get more and more extensive. In this way, the child can explore dangerous and unknown world. If suddenly the mother were to disappear, he would be thrown into anxiety" [17].*

He also uses the example of an individual with obsessive-compulsive disorder as an indication of how we try to self-create a semblance of safety and predictability in our lives, in the face of the world's unpredictability:

*"The neurosis in which the search for safety takes its dearest form is in the compulsive-obsessive neurosis. Compulsive-obsessives try frantically to order and stabilize the world so that no unmanageable, unexpected or unfamiliar dangers will ever appear; They hedge themselves about with all sorts of ceremonials, rules and formulas so that every possible contingency may be provided for and so that no new contingencies may appear" [17].*

Through our research, we talked with a number of individuals who had experienced their sense of safety ripped out from under them—all for different reasons—a crippling back injury, infidelity, finding out your wife was a lesbian after 5 years of marriage, an attempted suicide in the family and sexual abuse. Though the culprit was varied, the effect of this loss of safety had a similar effect. Since this violation of their Safety occurred despite their intentions, what was most palpable was their feeling of helplessness, as if they were caught in a wave, powerless, waiting

for the cycle to run its course. There was a general loss of control of their own life. This made them terrified and everything about their life reflected that. For example, for the individual whose brother attempted suicide, she explained that it led to her own “year of chaos,” and characterized the feeling like this: “*It was an intruder in our lives...it wasn't something that we had any control of, and it felt like a bomb went off.*” The victim of sexual abuse described as: “*I feel like my life stolen from me, and it pisses me off.*”

These intrusions also shared another characteristic: they did not feel immediately “fixable,” further adding to the feeling of being trapped. They had occurred chaotically, against the individual’s will, and on top of that, there was nothing that the individual could do to improve the situation or regain control of it, further exacerbating the lack of control that these individuals felt. For a young woman who was being treated for 5 different conditions she explained that “*there is no permanent solution or escape. It's not fair.*”

Ultimately, this “intrusion” to a human’s sense of safety and his/her trust in the world had severe consequences on the Self. For these individuals, it started to feel like there was a persistent “looming threat” and anxiety that they couldn’t escape. As explained by trauma psychiatrist, Bessel Van Derk Kolk:

*“If people are in a constant state of heartbreak and gut-wrench, they do everything to shut down those feelings to their body. One way of doing that is taking drugs and alcohol, and the other thing is that you can just shut down your emotional awareness of your body. And so a very large number of traumatized people who we see, I'd say the majority of the people we treat at the trauma center and in my practice, have cut off relationships to their bodies. They may not feel what's happening in their bodies.” [23]*

Ultimately, this led to a shutdown of Self’s potential and his/her future potential. These individuals experienced apathy towards life and a loss of hope. As described by the individual who developed a serious back injury: “*It felt like all the candles of HOPE had been blown out.*”

In deconstructing this characterization of Safety, we defined three building blocks that are necessary for the core need to be fulfilled.

## **CONTROL OF OUTCOMES**



**(vs. trapped by threat of chaos)**

A human starts building his/her comfort and trust in the world from birth, and he/she persistently relies on the trust that what happens in the world is generally reliable. In fact, that trust becomes subliminal, and we don't realize it's foundation until it's lost through an unexpected intrusion. In our research, we saw a number of examples of this: the unexpected death of a best friend, a shock cancer diagnosis for a individual's wife, and a suicide attempt by a woman's brother. Through these violations of order, if the word appears chaotic and unjust, the world becomes frightening and threatening. This ultimately leading to a loss of hope and overall apathy of the individual.

In Maslow's words:



*“Injustice, unfairness, or inconsistency in the parents seems to make a child feel anxious and unsafe. This attitude may be not so much because of the injustice per se or any particular pains involved, but rather because this treatment threatens to make the world look unreliable, or unsafe, or unpredictable.” [20]*

## **ABILITY TO HEAL**



**(vs. trapped by trauma)**

At the bare minimum, if something bad happens, a human needs the ability to take him/herself by the hand and heal. For example, for an individual who just went through a break up, she explained that:

*“my emotions felt like a big wave--I’m happy...I’m sad... I’m happy...I’m sad” and it was really scary to not feel like I had control of my emotions.”*

The feeling of not being in control of her well-being was unnerving and destabilizing, and she found herself caught up in a wave of emotions, like a unanchored ship in her own storm.

According to trauma researcher Bessel Van Der Kolk, *“when something happens that violates*

*your sense of order, you lose if people are in a constant state of heartbreak and gut-wrench, they do everything to shut down those feelings to their body. They may not feel what's happening in their bodies. They may not register what goes on with them" [23].*

The ability to heal is often characterized as resilience. I heard a Jesuit once describe this as an ability to be a starfish: "if your leg gets snapped off, can you heal right back." One participant who had dealt with two knee replacements and a hernia repair surgery explains her version of this:

*"It's called survival. You wake up each morning and you just do it bc its has to be done, you don't have a choice You can't put the pillow over your head and think 'I'll just sleep in today'."*

## **FINANCIAL FREEDOM**



**(vs. prisoner to \$\$\$)**

Financial freedom seems to be gained through a state of 'enoughness', the state of not

having to worry about how they'll pay for the next meal...medication...flat tire. Financial freedom is not a state of excess; it's a state of enough to get by. We heard this described through a number of individuals who were getting ready for retirement. They explained that they aren't looking to make big changes to their lives; they just want to feel like they won't have to penny pinch or alter their lifestyle to make ends meet. We also heard about the other side of the element, being a prisoner to money. We heard about patients having to make a decisions on which medication to stop taking because they couldn't pay for all of them. Ultimately, Financial Freedom is inherently linked to safety because it determines your ability to spend on medical care, eat certain foods that will keep you healthy, live in a certain neighborhood that will keep you protected.

# LOVE & BELONGING



Safely held in the hearts and minds of others

## Love and belonging

Safely held in the hearts and minds of others

The feeling of being loved, having a community and feeling support by others came up in every interview we conducted. We spoke with a number people who had unique points of view on love/belonging: 10 individuals who had gone through a break-up within the previous two months, a member of a co-living community, a monk who showed us how a monastery develops a sense of belonging, and a self-described “social anorexic.” Throughout all of our interviews we found a natural instinct toward belonging. As described by a young woman who described herself as “solemnly single,” *“I just know there’s an opportunity cost...of not being able to share my adventures with someone, wake up and cook breakfast...life is richer with someone else.”* This natural tendency seems to be most beautifully and poignantly described in Bessel Van Der Kolk’s ‘The Body Keeps the Score’:

*Social support is not the same as merely being in the presence of others. The critical issue is reciprocity: being truly heard and seen by the people around us, feeling that we are held in someone else’s mind and heart. [23]*

After listening to the individuals’ stories of love and belonging this idea, of being “held” in the heart and mind of another feels like the right characterization. People described their communities as their “emotional center” and “my landing place” which seems to be best represented through the idea of ‘holding’. We discovered four human elements that contribute to a feeling of love/belonging.



**(vs. trapped by going through life alone)**

The first human element is 'Coparticipants through life', the feeling of having others who are emotionally on your journey with you. The key characteristic of a coparticipant is that they are not just witnessing your life; they are experiencing it with you. Coparticipants have more skin in the game in a life; they hold hope for good things to happen to you, and they take on your experience as your own—from the exciting to the excruciating. For one individual who had recently broken up with her boyfriend, she explained that their break-up finally hit her when she saw ran into a dog on the street that was wearing shoes. She had the instinctual reaction to text her ex-boyfriend to tell him about the funny occurrence, until she remembered that they had broken up. Even such a trivial moment resulted in a shattering moment, "*he was the one who I would send pictures of a dog wearing shoes to...who is that person for me now?*" As a more emotional example, one individual had been arrested for a DUI and was sitting in court. She

ended up texting her friends that she was “freaking out.” When they asked what they could do, the individual responded, *“just chat with me; I need you to be here with me right now.”* This is the most basic function of a co-participant: to share in the experience of life and to prevent you from feeling like you’re going at life alone. As summarized by a recovered alcoholic about the the community he found through Alcoholics Anonymous: *“it’s a ‘we’ program. In AA, we get to share our experience and strength and hope in one another. If you do it alone, you’re destined to fail. We’re here and ready to help, and we row the boat together.”*

On the flip side, being ‘trapped by having to go through life alone’, makes it seem harder and void of something important. As illustrated by a self-described “social anorexic” who had struggled with social relationships for years and eventually decided to give up completely: *“being at home alone is not a day in the country club. When I pet my cat, I realize I’m missing out on something much bigger. I crave emotional support.”* This has a catastrophic effect on the Self and the journey of Being because, as explained by Bessel Van der Kolk: *“if we feel abandoned, worthless, or invisible, nothing seems to matter” [23].*

## SANCTUARY FOR TRUE SELF



**(vs. trapped by a mask)**

The second Human Element is 'Sanctuary for true self', a safe place for an individual's true personality to emerge from hiding. Maslow described a similar relationship between a therapist and a client when he described the experience of client-centered therapy: *"Here where the situation is set up...as permissive, admiring, praising, accepting, safe, gratifying, reassuring, supporting, unthreatening, non-valuing, non-comparing, that is where the person can feel completely safe and unthreatened, then it becomes possible for him to work out and express all sorts of lesser delights"* [17]. One of the individuals in Alcoholics Anonymous described the feeling as one of the most powerful moments of the AA experience: *"People walk through the door, and you can just watch them physically relax...phweeeef...I'm here...I'm safe. That's because: Yale or jail, we don't give a rats ass. If you ever go to an AA meeting or group, everyone is exactly the same."* I find it interesting that the individual described the physical release of being in a supportive environment, being able to see someone physically relax as a



response to this. At the end of the day, an individual needs to have the freedom to be his/her true self.

On the flip side, without this acceptance, an individual become 'trapped by a mask' that is forced on them by someone else. This was most common in restrictive relationships where a partner would pinpoint a "flaw" and urge the partner to be different. For one woman, her husband branded her as having a "lack of discipline" and she found that *"I began to take on his perceptions. I tried to be more controlled and disciplined. I mirrored him, and I even found myself becoming more critical and judgy of other people with big personalities."* A mask has an extremely negative effect on the relationship between an individual and his/her Self, driving a wedge between the two and forcing an individual to develop a conditional relationship his/her Self. Maslow describes the cause of this wedge: *"The primal choice, the fork in the road, then, is between others' and one's own self. If the only way to maintain the self is to lose others, then the ordinary child will give up the self" [17].*

Removing the mask requires the individual to remove him/herself from the group that is forcing that mask. The woman ended up divorcing her husband and she explained i the power of removing a mask: *"I've always been open hearted, but now I feel like there is no limit to it now. just don't care anymore what people think."* There were far too many examples of this to include full stories, but because this was so common, I will bullet a few more examples:

- A young woman's New York City friends expected her to be a "frat star" and the life of the party, even though she was over that stage of her life.
- A man felt pressured by his wife's lawyer friends to appear successful and polished, so he dug in at his management position at an investment firm, though this prevented him from realizing that this life was "completely unfulfilling for me"
- Even after breaking up with his partner, the partner continued to remind the individual that he

was a “bad person.” Eventually the individual removed the mask by “divorcing myself from your mental models.”

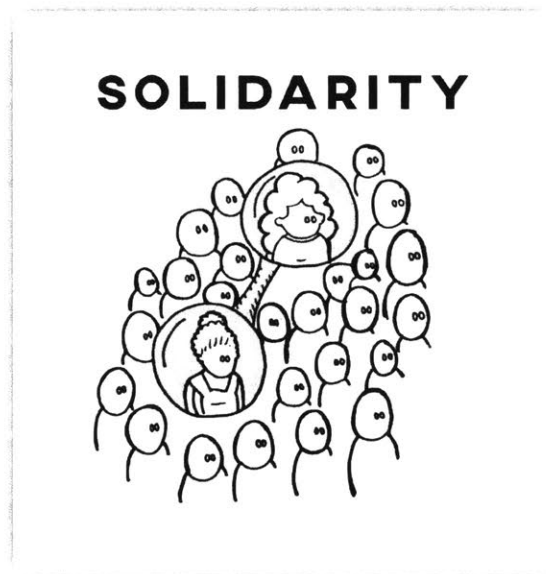


**(vs. trapped by feeling like a stranger)**

The third human element is ‘feeling known’, which comes from a community developing a deep and nuanced understanding of a person—through an understanding of his/her trajectory or unique context. For example, a med student explained her relationship with her parents in this way. *“They’ve seen me in all my lows and highs. They’ve seen all the things I’ve gone through and how it’s shaped me. They know what has molded my passion. I think of my life as a series of data points, and they have a pretty darn good trendline.”* Love/Belonging seems to come from more than just having ‘coparticipants’ and a ‘sanctuary for true self’, it also depends on people

understanding your fabric and the context that has shaped you. For instance, a shaman described her relationship with her best friend as, *“we only see each other once a year, but we pick up right where we left off. At the end of the day, she holds a memory of my life with her. She is my reflection of self.”*

This unique understanding equips the coparticipant with the special responsibility: to advise and hold an individual accountable to him/herself. It became clear when you feel known be someone, that person can hold you accountable or prevent you from going off the rails. For example, in Alcoholics Anonymous, they call someone’s ability to mess with their own head as ‘stinking thinking’ and described it like this: *“if you see someone going off the rail...if their brain is doing weird stuff to them, you have to talk to them. To make sure they don’t fool themselves.”* Armed with an underlying understanding of someone, a community can stabilize the human, helping him/her to remember who he/she is and why he/she is special. To do that, a more longitudinal understanding of the individual is required.



**(vs. trapped by lack of trust)**

The last human element is 'Solidarity', a feeling of unconditional support. Ultimately, the most common example of an individual feeling like they lost a sense of love/belonging was when an individual felt betrayed by someone he/she thought they could trust. For example, the man who described his journey towards becoming a "social anorexic" explained that it all started with a betrayal from a woman in his Alcoholics Anonymous group: *"she went behind my back, inflamed a conversation we had and turned the whole group against me. They were very willing to listen to her and believe her story without hearing my side of things. I watched her turn people against me who I thought were my friends in a really short amount of time."* On the flip side, a Pastor who we interviewed explained what it means to feel true solidarity with his parish: *"Sometimes you feel like someone will go behind your back and shame you, but when these people ask my how I'm doing, they wait for me to answer. And they don't use my words against me. I know they're for me."* Solidarity is that trust: that another individual is innately "for you." For a woman who experienced a mental breakdown, she explained her group of friends as *"aside from my family, the closest people to my heart. When I was psychotic, they took me in. They put me to bed...checked on me. They were my saving grace."* And the individual began to cry as she remembered, *"one of them, in my absolute lowest low, told me that he loved me."*

# ESTEEM



Trusting of your worth

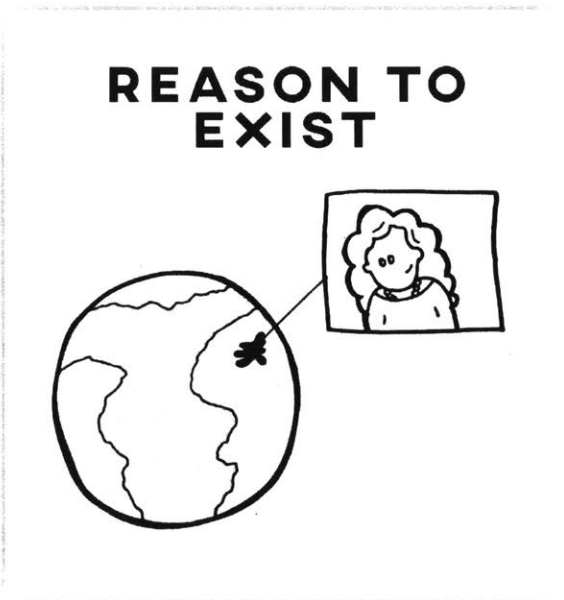
## **Esteem**

Trusting of your usefulness and necessity in the world

The fourth of Maslow's core needs is Esteem, which he essentially boils down to an inner trust in your usefulness as a human and, at the end of the day, a belief in your necessity in the world [19]. If the value of satisfying the previous core need, 'love/belonging', is to provide a community who surrounds the Self with support, bolstering and protection; the value of satisfying this core need, 'esteem', is to achieve support for your Self internally. This ultimately leads to the feeling of self-confidence, strength and a feeling of adequacy.

But where does esteem come from? Maslow clarified that all sources of esteem are not created equal and that self esteem is more powerful when it comes from 1) deserved respect *"the most stable and therefore most healthy self-esteem is based on deserved respect from others rather than on external fame or celebrity and unwarranted adulation."* and when it is linked to 2) *"one's own true inner nature, one's constitution, one's biological fate or destiny, or as Horney puts it, out of one's real Self rather than out of the idealized pseudo-self"* [17].

We have deconstructed the fulfillment of the 'esteem' core need into four human elements:



**(vs. trapped by a feeling of uselessness)**

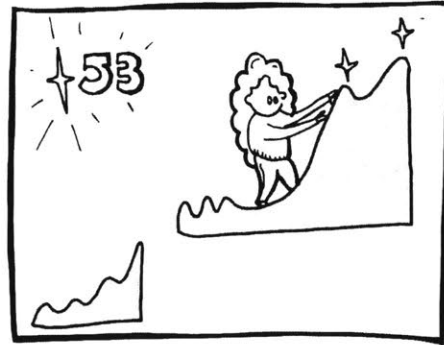
The first is a reason to exist in the world. This can be provided through nearly any channel or activity, big or small. For a recovered alcoholic, a reason to exist in the world came from being part of three organizations: his library, a softball team and his neighborhood council. These seem like really mundane channels for involvement and for the formation of esteem, but he explained their power for him: *"These organizations are the gifts of sobriety for me. They make me feel like I'm somebody. Alcohol makes me inhuman, and I would have never been a part of them if I were still drinking. They asked me to make pancakes for a fundraiser last weekend!"* For another individual, her unique reason to exist came from feeling like she was the "oddball" of her sorority, *"I'm one of the only two indian people in it, and I feel like that's what's what I'm giving back to it."* In both these examples, both individuals felt like their unique journey and Self allowed them to contribute something special.

This seems to be foundation of true 'reason to exist': it must be a role that stems from your unique gifts. For example, for the shaman we interviewed, her 'reason to exist' came from her natural gift of teaching: *"I'm really good at being a teacher, it's who I am and this is a way for me to step in and do it."*

On the contrary, without a true or uniquely defined reason to exist, the Self quickly crumbles. For one individual, his parents immigrated with him to America when he was a child and they worked seven days a week all their lives to make sure he was able to experience this life. As a successful consultant, he was able to support them financially as they got closer to retirement. Yet, this all stopped when he lost his job and was no longer able to help out. When he lost his main 'reason to exist' in the world, he went through a mental breakdown. This seems to reveal the power of a 'reason to exist' that is founded in your innate Self, rather than an extrinsic factor (like giving money). You may lose control over your ability to contribute something extrinsic, but you will never lose your ability to give the uniqueness of the Self.



# EVOLUTION



**(vs. trapped by a feeling of stagnation)**

In discussing matters of self-esteem, we encountered another element that we call 'Evolution'. It seems that humans not only need a reason to exist, but they need to feel themselves improving, molting, reaching farther—like they are a newly-released better model. This is what Carl Rogers referred to as 'Actualizing Tendency': *"the organism has one basic tendency and striving – to actualize, maintain, and enhance the experiencing organism."* One individual who we interviewed described her relationship with her job: *"I felt so challenged at work. It was a mixture of fear and discomfort, but I could see myself stretching and gaining new skills."*

On the other hand, without this, a human feels 'trapped by stagnation'. Stagnation is like a sludge in the body, disheartening and deadening the human. If our "basic tendency" is to

strive forward and improve; it makes sense that anything besides forward progress would be unmotivating. For example, one individual who we interviewed had been raised in Hawaii and imagined herself dedicating her whole life to the public school system that she had been grown up in. As she grew into her adult life, she started to feel like island culture was preventing her from evolving (she was rejected from three teaching jobs for being “too idealistic” and she felt like every island guy was intimidated by her). She ended up feeling like Hawaii was holding her back from growing, which she described: *“It was frustrating because, up until that point, I felt challenged and supported enough to take on new challenges. I felt like things were stagnating. I wasn’t excited about anything anymore. It was oppressive instead of liberating and exciting.”*

Another individual described a similar relationship with people in Boston. Typically, she loved meeting and interacting with people and was a self-described “connector,” but she was feeling herself stagnate and interactions with others now felt draining. This is how she described what it now felt like to meet people: *There aren’t many people on my level. When I look at what’s out there, I’m not that interested. I have the option to stay at home...in my controlled environment...watch TV, read, snuggle with my honey, or I have the option do to what? I feel tired here and jaded.”* Ultimately, if the Self feels like it loses its freedom to evolve, its vibrancy and kinetic energy also are squashed.



**(vs. trapped by an outdated life vision)**

Another common attack we found on an individual's self-esteem was from an outdated life vision that he/she had outgrown yet that still trapped him/her. These individuals lacked a 'Freedom of Path' to change the image of their own future in their head. For example, for one woman, ever since she was a little girl she imagined being a Nobel Prize professor. As she continued down that path, she slowly realized within that it was not right for her—little things stuck in her gut like the fact that her nieces/nephews didn't recognize her when she went home because she had to live far from home. Even so, it took about ten years and a mental breakdown for her to come to this revelation and to ultimately set herself free from that former life vision. Similarly, another young woman was trapped by the vision of going to law school: *"It was the path for me since I was 15."* Deep down, she was terrified about pursuing the path and she was essentially frozen in place. (She watched the application date for law school pass her

three times without applying.) Eventually she was freed by a offhanded comment her boyfriend made, "*you know, even if you get in, you don't have to go...*" This simple comment was enough to free her and edit her future vision.

The inherent paradox is that on one hand, having a life vision is comforting. We saw this through individuals who had recently broken up with their partners. The loss of the life vision they shared with their ex was crippling and the hardest part of the break-up. One individual who divorced his wife explained, "*You lose your future and your identity and all those dreams. We were going to be the people who travel together. I have to start over. Soul crushing is a good way to describe it.*" Yet, even though there is an inherent comfort in a life vision, an unwavering vision of the future traps an individual. This specific vision for life gives an equally as unwavering set of criteria by which the individual must live by to feel good and successful. (i.e. if my life vision is to be a nobel-prize professor, my worth comes from getting papers published). At the end of the day, a human needs malleability of vision to continue shaping the Self.

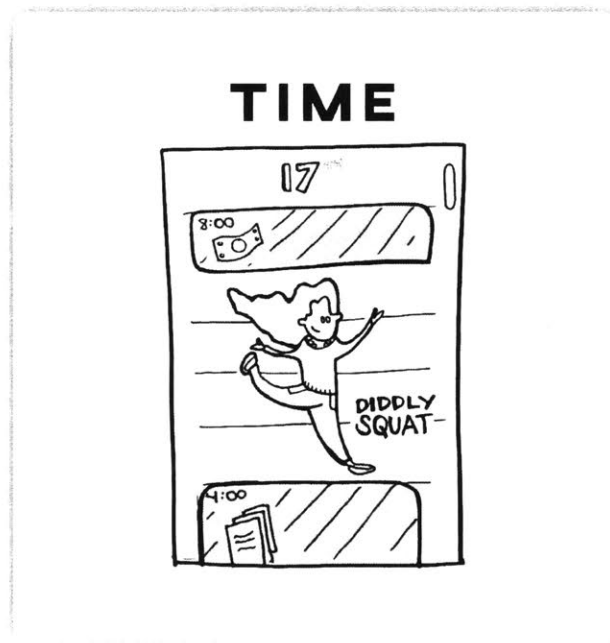


**(vs. trapped by negative self image)**

The final element that allows a human to fulfill his/her need for Esteem is 'Self Love'. We all are probably well acquainted with our inner voice—which is sometimes uplifting and sometimes disparaging. We've defined 'Self Love' as when the positive inner voice is more trustworthy and overpowering than the disparaging voice. This element of Esteem also became most clear through the stories of break-up we heard. Whether an individual was dumped or did the dumping, he/she was left with a general feeling of self-terribleness. For example, in her break-up, a woman was told that she wasn't intimate enough. She reflected on that: *"it just sucks not to be loved by someone you love. It causes you to doubt your general lovability. I couldn't be the one to melt the intimacy."* On the other side, the dumper felt incredibly guilty for hurting their ex and often was often quite hard on himself/herself for their lack of judgment. For example, for a woman who dumped her boyfriend of ten years:

*“At that point, I was like ‘shit I saw this coming a while ago. Why did it take me until now to realize that? ‘I’m smart, and saw this coming. Why didn’t I do anything? What does it say about my judgment that I didn’t listen to myself?!”*

Regardless of the source of the inner disparagement, this inner hate imprisons the Self because for its freedom relies on an inner support and advocating. Maslow at one point describes the Self as shy and timid, easily deterred, and this kind of inner negativity is one of the strongest forces against it. Rogers explains that without what he calls ‘self-regard’, “it is difficult to function in the world. Those who don’t have this are forever seeking ways to win affection” [16].



**(vs. trapped by lack of time)**

Sometimes a lack of safety isn't caused by the world or the body but from an imposition of another on your life or time. We saw this most commonly through highly restrictive jobs. For example, for one individual her job required her to travel every single day of the week which made her entire Self suffer (her relationships, her optimism, her physical health all deteriorated). For another individual, he was forced to live in a rural area for work, away from his friends in a "cold AirBnB" and he had a nervous breakdown.

Through three individuals who had all gone through what would be best described as an 'Awakening' recently, they all cited time as being the missing factor in their life. One described, *"Time was the difference. You're probably looking for something deeper, but it is really important. Now I can do what I want."*

When I asked another individual when she felt most like herself she explained, "when I get to choose my own time and schedule. During those moments, I have no one to be but myself. I'm not owned by anyone else."

# SELF ACTUALIZATION



Living in a state of self design



## **Self-Actualization**

### Living in a state of self design

We have just crossed from the left hand side of the Periodic Table of Human Elements to the right hand side—from a state of 'Existing' to 'Being.' As I discussed previously, though this 100 pixel division seems easily conquerable, it couldn't represent a bigger departure in the life of a human. In fact, many go their whole lives without making this passage.

Self-actualization is not like reaching the next level in a video game; it is an all-encompassing re-relation to life that can be easily blocked. Without any of the Human Elements we've discussed so far...co-participants through life...self-love...ownership of organism...it's like a hole is created in a balloon that prevents the human from entering this dimension.

On the other hand, if the Human Elements/ore needs are reasonably fulfilled, the Self is no longer in a state of shutdown (as a reaction to an impending fear or lack of Safety); it is no longer is self-conscious or masked (as a reaction to the search for the lack of belonging) and it no longer is distorted or manipulated (as a reaction to the search for Esteem), the Self is free, malleable, shapeable and thrillingly "designable."

We were lucky to talk with 18 individuals who had recently gone through the experience of gaining a new 'Freedom to Be' and entering into a state of 'Being' or what Maslow would call self-actualization. They each had entered into a state of active creation of Self, which they characterized through two common sentences: "I feel like I get to design my life now" and "I feel like I'm getting back to my roots." It was as if they grabbed the paintbrush (often for the first time in many years) and began painting their portrait themselves. And no factor was off limits, in fact, they painted all parts of their life—from clothes to job to relationships to hobbies to hopes. For one individual, this meant becoming more eccentric: she buying a whole new inventory of

hawaiian shirts, doc martins, and developing a taste for “weird cheese.” For another, it meant a list of things he was going to learn: Balboa dance, Spanish, how to perform the “cups song” from Pitch Perfect. For another it was expressed best in a ecstatic proclamation: “now I can wear a shoe on my head if I want!” I love the way Nietzsche characterizes the essence of active creation, as being a “real helmsman”:

*“It follows that we must wish to be real helmsman of this life rather than allowing it to be thoughtless and arbitrary. One must take a somewhat mischievous and dangerous attitude towards existence. No one can build the bridge for which you and only you must cross the river of life” [32].*

Though it did not seem hard for these individuals to learn or acclimate to their newfound freedom, to mischaracterize this state of self-actualization as immediate. There is a period in between achieving a ‘Freedom to Be’ (from whatever freeing factor enabled this) and entering a state of Being/self-actualization. In fact, for many individuals, their ‘Freedom to Be’ came from something that wasn’t a happy moment. (We saw individuals become untrapped through divorce, rejection, mental breakdown, and the death of a dog.) It took mourning and stabilizing before eventually flourishing. In fact, Existentialists often associated an ‘Awakening’ like this with a impending anxiety because with the ‘freedom to be’ you gain the freedom to be anything, which is overwhelming, chaotic, and anxiety-inducing. Thus, in analyzing the movement of an individual from ‘Freedom to Be’ to a state of self-actualization, we identified four human elements that equip a human to navigate their new freedom and ultimately flourish in it.

In a letter that W.E.B. Dubois wrote to his daughter upon her start of boarding school.

*Take the cold bath bravely. Enter into the spirit of your big bed-room. Enjoy what is and not pine for what is not. Take yourself in hand and master yourself. Make yourself do unpleasant things, so as to gain the upper hand of your soul.*



The first, 'Inner Ear' is an tuning of your senses to start noticing your inner pings. Carl Rogers called this an 'openness to experience' in which human "becomes more openly aware of his own feelings and attitudes as they exist in him[her] on an organic level" [16]. As an individual starts to develop an 'Inner Ear', he/she begins noticing his/her preferences, questioning little actions that don't seem right, and noticing uniquenesses in his/her Self. As described by a woman who had gone through a break-up recently, *"I feel more like myself again. When I was in that relationship, I made myself smaller and smaller to accommodate his need. It's like I can feel 'me' rushing back into myself."* Another individual described a recent revelation she had, *"I left a well paying job as an engineer to become a physical therapist, and the only way I knew how to explain that to people was to tell them that it felt right in my body."* The one issue I have with Rogers' explanation of "becoming more openly aware of his own

feelings” is that it seems to mischaracterize the what his openness really looks like. When an individual is in this stage, they don't just gain an inactive awareness of the Self; they gain a relationship with the Self, as if the Self comes alive on its own. The Self begins to respond, alert, and even seems to lay little clues or playful signals for the person. Having a 'inner ear' is like the scene in Peter Pan where he chases his shadow around the room, and the shadow seems to have a mind of its own.

This is fantastically described by Nietzsche :

*“Any human being who does not wish to be part of the masses need only stop making things easy for himself. Let him follow his conscience, which calls out to him: "Be yourself! All that you are now doing, thinking, desiring, all that is not you. And how hopeless and meaningless life can be without such a liberation! There is no drearier sorer creature in nature than the man who has evaded his own genius and who squints now to the right, now towards the left, now backwards, now in any direction whatever [32].*



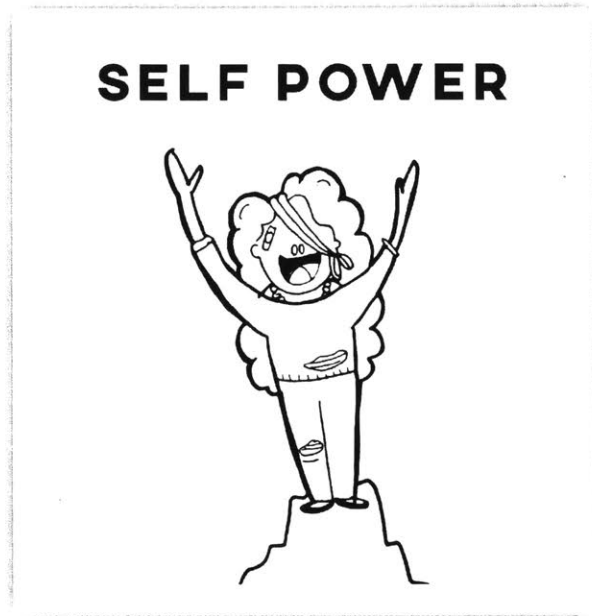
The second human element is 'malleability', the ability to act on your freedom and shape your life and identity in a specific direction. What became clear was that spontaneous acts were

not flippant or naive; they allowed an individual to feel his/her 'Freedom To Be'—to change or create his/her Self in whatever manner he/she chooses and, in that sense, spontaneity was a reinforcer of self-actualization. For example, for the woman who grew up imaging one life path for herself: Nobel Prize scientist/professor, the key to her self-actualization journey was joining a gym in Nova Scotia. She explained that there were only four hours of life a day so everybody hung out at this big gym. She starting attending group exercise classes, which she described as thrilling because she "never imagined" that she would be in that situation and it "gave me an identity beyond 'world renowned professor'." She elaborated that it felt like, before the gym, she had been wearing glasses that only allowed herself to see red...she was only good at academics. Joining the gym community and participating in an activity that was so far from the mold of 'world renowned professor' made her taste the *"complete possibility that maybe you're capable of more than you thought."* She started seeing all the colors of what life could be. It gave her the feeling that: "I can do anything." She gained 'Malleability'.

We talked with a man who used to spend most nights on the couch and explained that he only use to get a sense of identity from having a well kept lawn. He had gained 45 pounds in the past 10 years, so he decided to start walking to work. One day, he decided to start running for a bit of the walk to work, and over time, the distance he ran each day grew, block by block, until he was eventually running the whole way. That led him to join a running club at a local bar and the increments continued: 5k...10k...marathon. Today he runs ultra marathons up to 70 miles. He explained "I essentially live a different life." As a final reflection about the shift he explained the power of this journey, *"it made me realize that I can change."*

*I don't need to know. I don't want to know. I have some guardrails, and that's enough.*

*Serendipity is going to be a cool thing in my life.*



The third human element is 'Self Power', a deep trust in yourself and your ability to make judgment calls, get out of tough situations, protect yourself, and find happiness. With self power, the human feels a trust in himself/herself that whatever comes along, he/she will be capable of reacting and staying afloat. When this is achieved, the future stops being unnerving because the individual gains the power and confidence to weather whatever comes his/her way. For example, for the woman who left Hawaii because she felt trapped by stagnation, she explained the effect that this experience had on her: *"My whole life was certain up until that point, and I didn't know I was capable of making such big decision on my own. Something in me switched. I really started*

*to believe that it was all going to work out and that I was capable. I began to really trust myself and my ability to fail.*“ This is an instrumental factor in the transition from ‘Freedom to Be’ to ‘Self Actualization’ because without it, the human won’t feel confident in his/her abilities to self create or fare in a more open state of existence.

The other effect this has on the individual is that the increase in self trust means that the individual begins to look primarily inward for approval rather than to others, or in Carl Roger’s words, he/she develops an ‘internal locus of evaluation.’

*“Less and less does he look to others for approval or disapproval; for standards to live by; for decisions and choices. He recognizes that it rests within himself to choose; that the only question which matters is, ‘Am I living in a way which is deeply satisfying to me, and which truly expresses me?’ [16].*

Every individual held symbols of their spontaneity and malleability. For the previous example, it was the number of miles he had gotten up to. For a COPD patient, it was the 10% increase in lung function from her last doctor’s visit. But, for others, it was less quantitative. For one individual, it was how much more her friends reach out to her for help now that she’s not “living selfishly.” For another individual it was completing a biking trip in the mountains in New Zealand and comparing it to her old life, *“I couldn’t have planned a trip like that much less biked up all those mountains!”* There is something innately powerful about holding these symbols that reflect the flexibility and shapeability of the Self.

## COMFORT BEING A WORK IN PROGRESS



The next human element is 'Comfort being a work in process', the perspective of not being a fixed entity or to expect completion of Self. In the interview, we typically asked individuals, "What do you hope for in the next six months?" The individuals who were in a self-actualized state had an adverse reaction to that question and typically corrected the question. For example, one individual responded with a laugh, "Oh, I don't do that anymore. You've caught me at a life stage where I don't do certainty." Another explained that, "My life could be measurably different in a month. I don't borrow trouble." And, as a final example, another individual explained that she will set themes for herself like "balance" but not specific goals.

Rogers explained this transition in the context of a therapeutic relationship:

*"It is that the individual seems to become more content to be a process rather than a product. When he enters the therapeutic relationship, the client is likely to wish to achieve some fixed state: he wants to reach the point where his problems are solved, or where he is effective in his work, or where his marriage is satisfactory. He tends, in the*



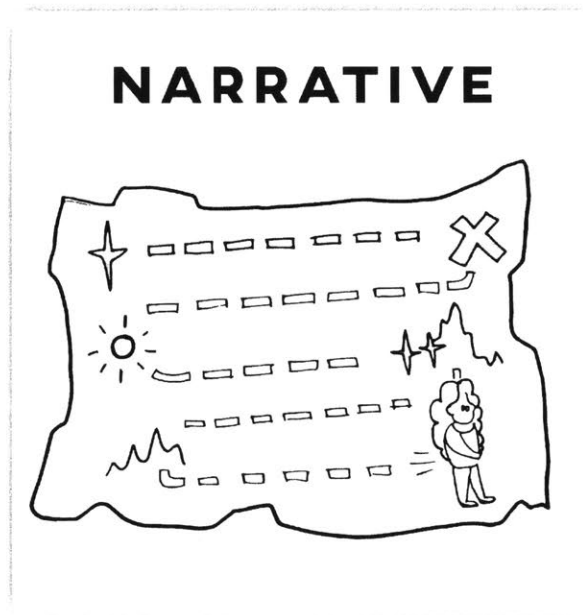
*freedom of the therapeutic relationship to drop such fixed goals, and to accept a more satisfying realization that he is not a fixed entity, but a process of becoming" [16].*

The obvious effect is that this equips an individual to deal with the inevitable ambiguity of life and prevents him/her from having to experience the restriction of a defined future. Finally, it seems to arm the human with a healthy childishness and playfulness, as if giving yourself permission to not be a finished product allows him/her to take him/herself far less seriously.

Maslow described this as:

*"They were very mature, were at the same time also childish. I called it a healthy childishness, a second naivete, It has also been recognized as 'regression in the service of the ego' [17].*

Reaching a self-actualized state does not mean that the human becomes immune to potential entrapments or permanently achieves his/her basic needs. Yet I will say that it seems like those who reached this stage and have experiences with these human elements (inner ear, malleability, self power, comfort as a process) seem to become less vulnerable to any deficiencies in the basic needs / entrapments that may arise.



The final element is narrative. As previously mentioned, when we asked participants the main question of the interview: “what was the last chapter of your life to close?” without missing a beat, participants would knowingly chuckle and launch into their answer. Many participants even said, “Oh, I have a good one for this.” It’s almost as if the entire ‘last chapter’ storyline was already written down next to them, waiting to be explained.

It seems that who we are currently is in natural reaction to our “last chapter” and that we string a narrative together to give our Self meaning. I think that is why these interviews were full of such richness and seemed therapeutic for the participant: it gave him/her the chance to trace his/her narrative backward and glean meaning for his/her Self.

For example, one participant had spent 2017 in a “despair chapter.” This chapter had closed a couple weeks before the interview when she decided, in a completely out-of-character move, to quit a new job after one week of employment. She described this moment as a

“reclaiming” of herself and active moving of herself out of despair chapter. Since that moment, everything felt different for her: she started scheduling coffee with people to hear about how they decided what to do in life and she started allowing herself to admit that “I have no idea what I want to do,” but that she was going to “take it easy on myself and figure it out.” That moment shaped her narrative; she was now actively in charge of her destiny.

# SELF TRANSCENDENCE



Fusion with the world

## **Self-Transcendence**

### Fusion with the world

Maslow was consumed by the idea of self-transcendence in his later writings, which he had originally included within the description of self-actualization. In 1969 he admitted that he had mixed two distinct concepts and he edited the model, placing self-transcendence as an additional step beyond self-actualization. Maslow honed this understanding by studying people's 'peak experiences', which he described as the "uncharacteristically ecstatic moments when the world feels a little bit different" like being held by a lover, falling into a sky filled with stars, or holding your baby.

We have defined self-transcendence as 'living in grand relation to the world'. Regardless of the setting or the activity, the defining characteristic of a 'peak experience' is their ability to rewire a human's relationship to the world, drawing the curtains of the Self, extending the gaze outward and removing the unrelenting barrier between 'me' and 'else'. These moments bring a visceral feeling of wholeness and unity with a deeper order. If even just for a mere moment, people reorient, blending into a greater fabric, plugging into an amazing circuitry that encompasses all. Unified to else. As explained by Maslow,

*"The whole of the world is seen as unity, as a single rich live entity. In other of the peak experiences, most particularly the love experience and the aesthetic experience, one small part of the world is perceived as if it were for the moment all of the world. In both cases the perception is of unity" [17].*

Maslow goes on to explain that these moments, of transcending the Self, come from true self-actualization. Counterintuitively, the more defined an individual Self becomes, the more capable he/she is of transcending himself or herself. Maslow characterized this as *"the greatest*

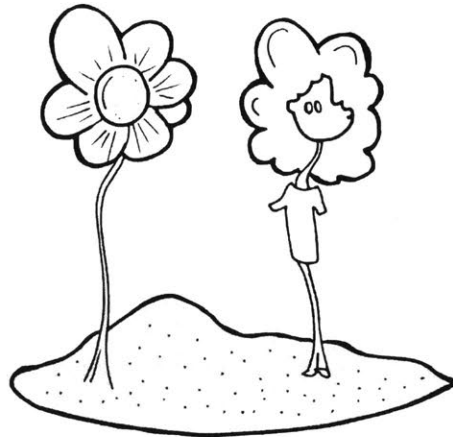
*attainment of identity, autonomy, or selfhood is itself simultaneously a transcending of itself, a going beyond and above selfhood" [17]. He goes on to explain that as a human "gets to be more purely and singly himself he is more able to fuse with the world."*

Perhaps this paradox is explainable: although the Self becomes more vibrant and defined in a period of self-actualization, it also becomes completely attentive (inner ear), malleable and trusting (self power)--the right blend to for an individual to open him/herself to the world beyond him/herself.

We found that in these moments also had a unique ability to reflect the Self back to the individual. For one individual, after a multi-month journey to reestablish her happiness, she described a solo hike in Japan. She explained it as a *"visceral moment where my time on earth felt living. Everything felt so vivid...I could create a 3D art exhibit from that day."* In that moment, she also reflect, that she could feel the *"choices I had made that got me there. It felt like a reward for the personal growth I had experienced."* Similarly, another individual explained her experience in a tantric session with her partner and she explained that *"it reminded me how far I had come in my vulnerability."*

Again, the self-transcendent moment can occur in myriad venues, but there are three categories of self-transcendence experiences, which we've defined as the human elements for this section. I could have written an entire thesis on one of elements alone, but I will briefly comment on their self-transcending power. The interactions we have with these elements are the most beautiful moments we experience, yet they are ethereal and hard to describe, so I will rely on their descriptions of artists who have often devoted their careers to shining light on the latent experience of planet, art and love.

## NATURE



The natural world is perhaps the most common setting for self-transcendence. We live the majority of our lives on a different plane than the planet. We inhabit the indoors—our bedrooms, boardrooms and communal spaces are all bunkers to the outer world, and this unlinks our existence from the natural order which we are inherently of. If a human comes openly (inner ear) and without ego (comfort being a process), nature has the powerful ability to shake us from our fabricated indoor existence and re-orient ourselves to our natural heritage. Poet, Mary Oliver, explained this moment as a “sudden awareness of the citizenry of all things within one world” in her book ‘Long Life’.

*“Once, years ago, I emerged from the woods in the early morning at the end of a walk and — it was the most casual of moments — as I stepped from under the trees into the mild, pouring-down sunlight I experienced a sudden impact, a seizure of happiness. It was not the drowning sort of happiness, rather the floating sort. I made no struggle toward it; it was given...”*

*Time seemed to vanish. Urgency vanished. Any important difference between myself and all other things vanished. I knew that I belonged to the world. and felt comfortably*



*my own containment in the totality. I did not feel that I understood any mystery, not at all; rather that I could be happy and feel blessed within the perplexity — the summer morning, its gentleness, the sense of the great work being done though the grass where I stood scarcely trembled. As I say, it was the most casual of moments, not mystical as the word is usually meant, for there was no vision, or anything extraordinary at all, but only a sudden awareness of the citizenry of all things within one world: leaves, dust, thrushes and finches, men and women. And yet it was a moment I have never forgotten, and upon which I have based many decisions in the years since" [24].*

Transcendentalist and Naturalist, Henry David Thoreau, explained this feeling as if the woods became a "companion" who he walked with.

*"In the street and in society I am almost invariably cheap and dissipated, my life is unspeakably mean. No amount of gold or respectability would in the least redeem it — dining with the Governor or a member of Congress!! But alone in distant woods or fields, in unpretending sprout lands or pastures tracked by rabbits, even on a black and, to most, cheerless day, like this, when a villager would be thinking of his inn, I come to myself, I once more feel myself grandly related, and that the cold and solitude are friends of mine. I suppose that this value, in my case, is equivalent to what others get by churchgoing and prayer. I come to my solitary woodland walk as the homesick go home... It is as if I always met in those places some grand, serene, immortal, infinitely encouraging, though invisible, companion, and walked with him" [25].*

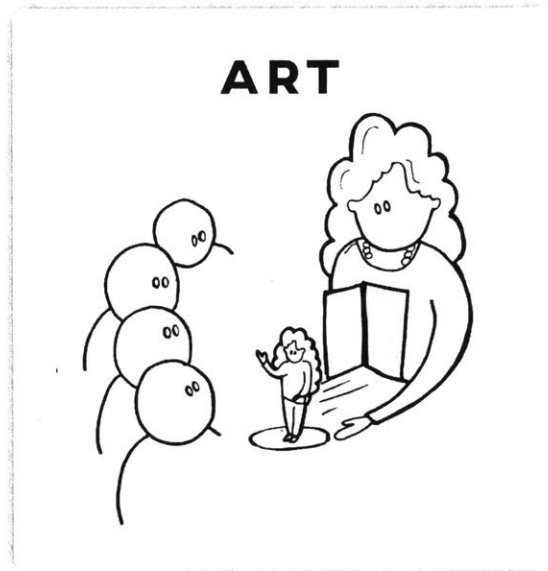
And finally, American journalist, Margaret Fuller, explains this feeling as if embraced by the planet, like a Mother:

*"There how happy you will be when first embraced by the very arms of nature, your ear and your mind filled, needing no thought but of the solemn harmonies of sky and sea, you will feel as if the mighty Mother has always before kept you like a little child studying the hornbook at her knee and that never till now had you been near enough to feel the beating of her heart [26].*

In all three of these descriptions the planet, so vividly alive, breaks the fourth wall, welcomes the human and begins interacting with him/her directly. Typically, the world seems oblivious to our presence, and in this moment, it's as if as if the planet admits, "I've seen you the whole time, and I've been waiting for you to come back." I am not going to try and explain the mysticism of



this moment, merely reflect on the power of the natural world to seize a human and jolt him/her into a different orientation, shattering our indoor/outdoor divide.



Art, is the second supernatural force in the life of a human, unique in its ability, like nature, to re-orient. Beethoven wrote in a letter to an aspiring pianist in 1812 in which he said, “only art and science can raise men to the God-head“ [6]. Art’s unique ability is to fuse our inner spirit with the collective spirit of humankind--across time. Nature allows us to meld with the greater natural order, while art allows us to meld with greater human spirit. Naturalist and scientist, Rachel Carson, explained the self-transcendent power of the creative act to allow us to reach beyond Self and inhabit the spirit of another:

*“The writer must never attempt to impose himself upon his subject. He must not try to mold it according to what he believes he readers or editors want to read. His initial task is to come to know his subject intimately, to understand its every aspect, to let it fill his mind. Then at some turning point the subject takes command and the true act of creation begins...the discipline of the writer is to learn to be still and listen to what his subject has to tell him” [40].*

The connective strength of Art is not just its ability to link our inner with another, but our inner with *all* other. If our human spirit is a winding and ceaseless river. We stand at the bank, one tiny pebble in the full glory of that river. Art is the transformative force that allows us to enter the river, into a fluid relationship with our human past, the miles before, and our human future, the infinite flow ahead. In that sense, as beautifully explained by Jeanette Winterson:

*“Creative work bridges time because the energy of art is not time-bound. If it were we should have no interest in the art of the past, except as history or documentary. But our interest in art is our interest in ourselves both now and always. Here and forever. There is a sense of the human spirit as always existing. This makes our death bearable. Life + art is a boisterous communion/communication with the dead. It is a boxing match with time” [33].*

Art allows us to enter a fluidity with our full existence. As explained by James Baldwin:

*“You think your pain and your heartbreak are unprecedented in the history of the world, but then you read. It was Dostoevsky and Dickens who taught me that the things that tormented me most were the very things that connected me with all this people who were alive, or who ever h[49] J. Winterson, *Why be happy when you could be normal?* 2012.32ad been alive. Only if we face these open wounds in ourselves can we understand them in other people” [28].*

Have you felt this? Have you given your spirit to the us? Entering this river allows us to see our neighbors—the Self in the context of all other Selves. In creation, we become one. It makes you wonder, what could be more important in life than donating to our river?



And that leads us to the last human element. Love. No element is more synonymous with Being or the human. There is no greater. Love's self-transcendent property is catapulting. I am overwhelmed by trying to explain the glory in a few paragraphs.

We need to make an important distinction before we go any farther because we have already discussed 'Love/Belonging' as a basic need, though 'love/belonging' is not the Love that we're discussing here. We have entered a different realm. Maslow made this distinction clear by drawing a separation between: D-love, "deficiency love" vs. B-love, "being love." D-love is the need to be safely held in the hearts and minds of others. It is a protective relationship, symbiotic, uplifting and paramount to the functioning of a human. When people talk about humans being "social animals" and our inherent "tribe-orientation" they are classifying love as a deficiency need. B-love is different. It is an all-encompassing, entwining of two spirits that has permeates all aspects of their Being. D-love contributes to a stable human; B-love raises the

human to the supernatural, the “God-head,” to steal Beethoven’s classification.

In the same way that art is an inherent meld of two spirits, Rollo May, an existential psychologist, described this opening of oneself to another:

*Love and will are interdependent and belong together. Both are conjunctive processes of being -- a reaching out to influence others, molding, forming, creating the consciousness of the other. But this is only possible, in an inner sense, if one opens oneself at the same time to the influence of the other [29].*

These four lines make the physics of Love seem manageable: an opening of yourself to the embodiment of another and a reciprocal opening of another to you. But, as we know, the feeling of being in love is indescribable. It is a full expression of our Being.

One of my favorite descriptions of love is from Vincent Van Gogh’s letters. He details the all encompassing force that love exerts on his Being. First, in a letter to the woman for whom he loved:

*“When I saw you again, and walked with you, I had the same feeling which I used to have, as if life were something good and precious which one must value, and I felt more cheerful and alive [30].*

Then in a description of Love’s effect on him to his brother;

*“Since the beginning of this love, I have felt that unless I gave myself up to it entirely, without any restriction, with all my heart, there was no chance for me whatsoever. If you were in love with the same sort of love as I, and, boy, why should you ever have another kind of love, then you would discover something quite new in yourself...we are used to doing most of our work with our brains -- with a certain diplomacy, with a certain sharp calculation. But now fall in love, and look here, you will perceive to your astonishment that there is still another force that urges us to action, that is the heart” [30].*

Finally, this all-embodying characteristic of Love is best felt through Elizabeth Barrett Browning’s famous Sonnet, ‘How do I love you?’,

*How do I love thee? Let me count the ways.  
I love thee to the depth and breadth and height*

*My soul can reach, when feeling out of sight  
For the ends of Being and ideal Grace.  
I love thee to the level of every day's  
Most quiet need, by sun and candlelight.  
I love thee freely, as men strive for Right;  
I love thee purely, as they turn from Praise.  
I love with a passion put to use  
In my old griefs, and with my childhood's faith.  
I love thee with a love I seemed to lose  
With my lost saints, -- I love thee with the breath,  
Smiles, tears, of all my life! -- and, if God choose,  
I shall but love thee better after death.*

There is not greater effect on a human or his/her Being than Love. One of our participants summed it up passionately and urgently in the last 30 seconds of her interview, *"I've come to realize there is nothing besides love. It's the only answer. It's not about what you deserve, it's about what you believe, and I believe in love."*

## Chapter 4: Whole Human Design™

You've made it a long way. We've covered the theoretical basis of Whole Human Design and revealed the human elements that form the core framework. From this point forward, we shift to to serve design's ultimate purpose: usefulness. While research and academia seek to further knowledge; we, as designers, seek utility—reduced pain, delight, life improvement. Therefore, in the spirit of usefulness, I will show you how Whole Human Design can be practiced. First, I will briefly summarize the fundamentals of Whole Human Design (outlined in Part 0). From there, I will introduce how the methodology is used and provide a case study of how it comes to life through a real project for a client that focused on drug adherence.

### Summary

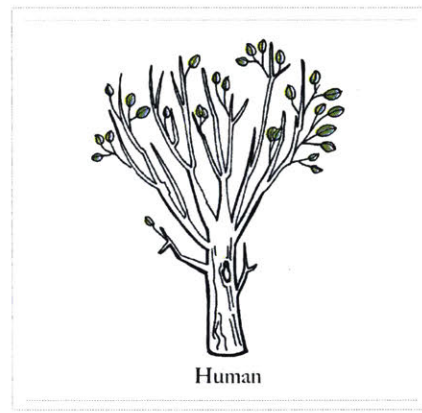
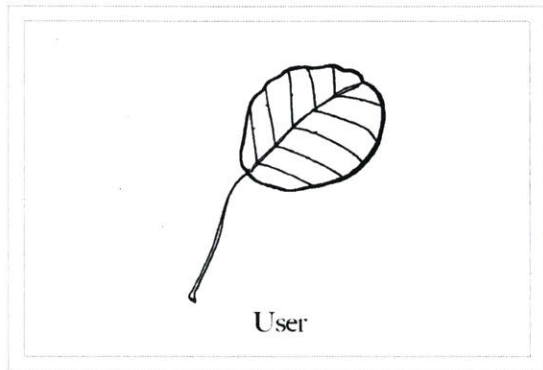
Purpose: *improve lives through Design*

Whole Human Design seeks to improve the experience of humans through reduced pain, ease, and increased quality of life. At the end of the day, this is probably the most commonly cited purpose of Human-Centered Design as well (though the two methodologies approach this end goal differently).

Approach: *design for users in the context of their whole humanness*

While Human-Centered Design seeks to solve for needs of the user; Whole Human Design seeks to solve the needs of a user in the context of their whole humanness.

Designing for a user is like designing for one leaf of a tree; designing for user in the context of his/her humanness is to connect that leaf to its branch...the trunk...and its underlying root structure. This is done by creating a 'Whole Human Needs List' that attaches a user's needs to his/her greater human needs (the Human Elements).



### Principles

Given this approach, and need to design for the 'whole human', this is the perspective through which Whole Human Design defines humanness:

1. **There is no universal definition of humanness.** Every human is brilliantly different and is on a unique journey. While there can be no ultimate definition of a human or definitive human needs, there are 'Human Elements', elements of our existence that affect our happiness and ability to thrive.
2. **A HUMAN = a Self, an unfinished product .** The best definition of humanness we can provide is borrowed from Existentialism, a human is synonymous with a 'Self' which is

defined as an unfinished project. Inside the human is both an ‘actuality’ (his/her current perception of Self) and a ‘potentiality’ (a vision of his/her future Self). This gap provides the fundamental basis for Being and self actualization. In fact, this gap was evident in our qualitative study. We asked participants to *please rank your life on a scale from 1 to 10 (1 = least desirable life, 10 = most desirable life)*. The mean was 7.57. (Figure 13).

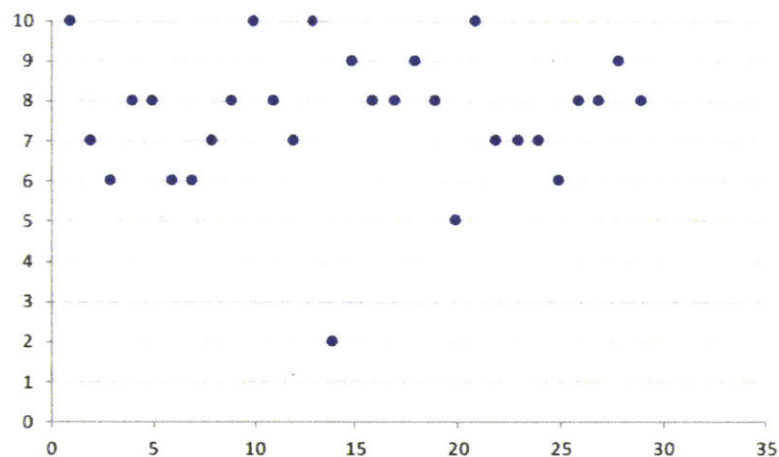


Figure 13. Subjective Well Being Plotted for Study Participants.

The vast majority sit between 6-9, which would make sense if the sample who we interviewed was more cohesive; yet we interviewed individuals in a wide range of life states—from individuals who were completely homebound because of illness to one individual who had achieved full “ego-transcendence.” For example, a woman with COPD and Diabetes ranked herself a 7. When we asked her what a 10 looks like (her ‘potentiality’), she explained that it represented a fully functional body and a “normal life.” Later that day, we also interviewed a 35 year-old woman who starting her own business and deeply enthralled with a beautiful self-finding journey. That participant also ranked



her life a 7. This was a shocking moment: the first participant's 7 would have been a 1 or 2 for the second participant, yet their subjective well-being plotted them on the same point. This made it clear that every human has an untapped potential that is relative to their current Self and the way a human assesses their well-being is calibrated to their unique context.

**3. BEING = to take hold of the Self and actively creating it.** Also borrowing from Existentialist thought, 'Being' is to exist in a state of active self-creation, a state of journeying, holding responsibility for making Self and committing to that discovery process.

**4. The Self is found in everything.** Through these interviews we heard about many topics—from raising pet mice to starting a porn career, and it became clear that the Self is actively involved in every part of a life. The Self doesn't relegate itself to the most noble or grandiose of activities. For one participant, the Self was found in a simple conversation with one of her students where she was able to share a word from her native Hawaiian culture that made her students understand the concept she was explaining. For another who had recently gone through a break-up, the Self was found in a toolbox given to her by her father. The Self can be easily relegated to therapy sessions, retreats and private meditations, but the Self is alive in the messy and mundane—the streets, the Megabuses and the cubicles. It doesn't matter if we're talking about a Walgreens, a hospital bed or a make-up kiosk; the Self is present.

## Framework

The Periodic Table of Human Elements is a framework that supports your ability to design for the Whole Human. Used hand-in-hand with traditional HCD processes, it will help you understand the human holistically rather than as a fragmented user in the research, analysis and ideation phases of a project.

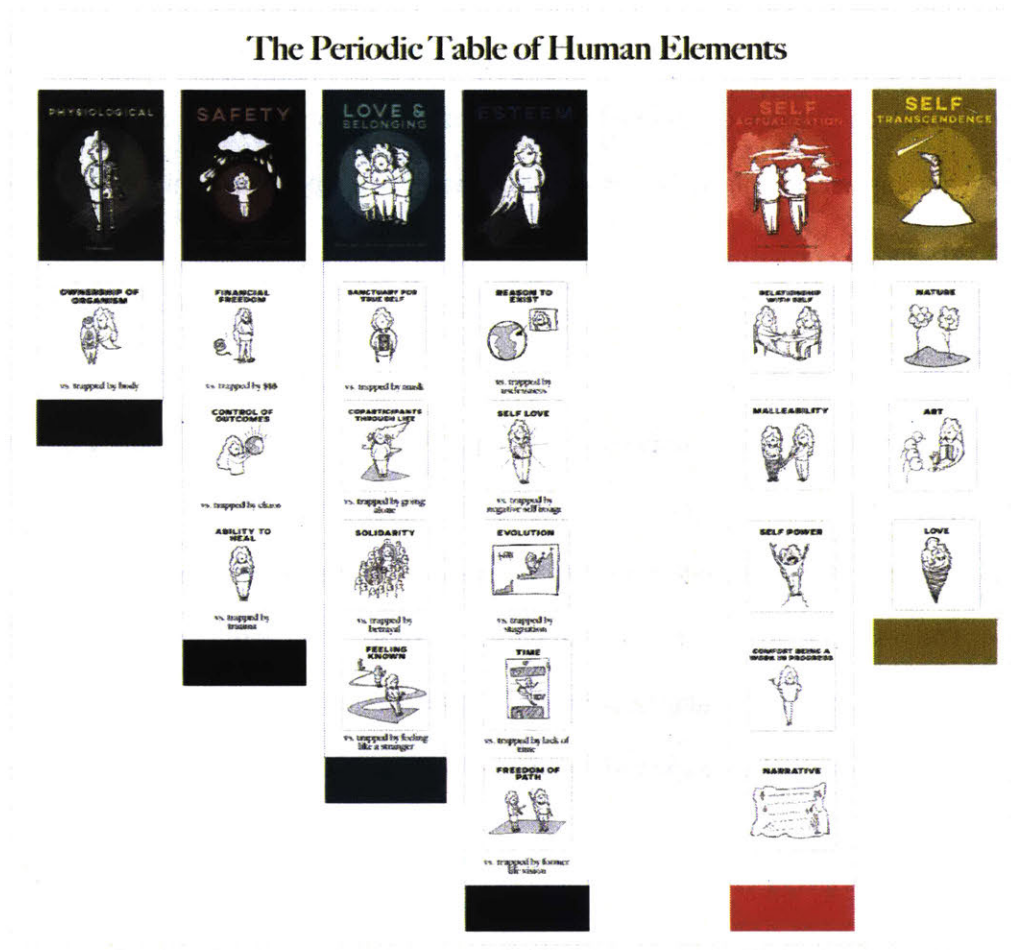


Figure 14. The Periodic Table of Human Elements.

While the detailed dynamics have been discussed previously, I will review the most important dynamic represented in this framework: Trapped vs. Being. If a human is missing any number of the human elements on the left-hand side of the Periodic Table (“T-elements”), his/her Self is at risk for being “trapped” by that deficiency. Like a hole in a balloon, the Self is prevented from rising into a state of self-design, imagination and hope (described most commonly as “It’s hard to get out of bed in the morning”). Conversely, if he/she has achieved a reasonable satisfaction of these elements, the Self gains a ‘Freedom to Be’. From there, the human can rise to his/her potentiality and create Self (described most commonly as “I feel like I get to design my life”).

#### Role of a product

The role of a product is twofold: to ensure it is not contributing or creating a deficiency on the left-hand side (T-elements), trapping the individual from entering into a state of Being. And secondarily, to assist the human in gaining B-elements to reinforce the Self and empower self-creation. The prioritization, between T-elements and B-elements, depends on the product context. For some projects, the strategist will be largely focused on preventing holes in the T-elements and for others, the strategist will be primarily focused on contributing B-elements.

#### Intended outcome

Whole Human Design is expected to increase the quantity, variety and potential life impact of ideas generated through the process,

## Case Study

### Process

I will now illustrate how Whole Human Design can be practiced through a case study on medication adherence. This project was completed for a Fortune 50 company that was interested entering a new market and exploring potential innovation opportunities.

### Client

The client for this project was a large pharmaceutical company.

### Context

In the outcomes-based evolution of the healthcare industry in the United States, healthcare providers and stakeholders are more concerned than ever about keeping patients adherent to their regimen. It is economically-imperative that a patient is not readmitted to an inpatient setting and taking his/her meds is a big influencer in whether or not that happens. Thus, many start-ups and companies are attempting to try and solve adherence through new technological products.

### Design prompt

Patient non-adherence (failure to take their medication) is a \$300B cost to the healthcare industry today. One half of patients don't pick up their meds in the first place. (And for those that do, two thirds don't end up using them correctly.) How can we help patients stay adherent to their medications?

## Process

### Research

Whole Human Design starts by defining the three different levels (think leaf, branch, trunk). In Whole Human Design, we are not just seeking to understand the user (a leaf); we want to understand how the user experience connects to the deeper human experience (the trunk). We need to define these altitudes now, before we start our research so that we can ensure we gain an understanding in all three areas.

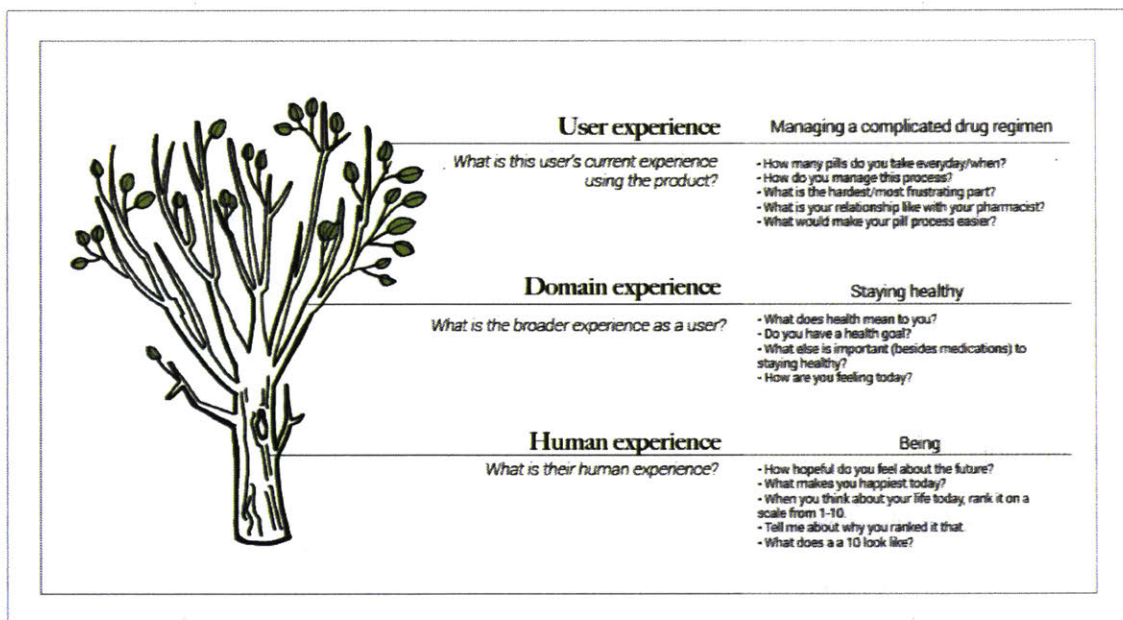


Figure 15. Whole Human Discussion Guide.

The topmost level is the 'user experience', which is the category we are most familiar with and that Human-Centered Design focuses on. This level explores the needs that are

directly related to the particular product. For example, in this project, we defined the user experience as ‘managing a complicated drug regimen’. We were interested in all things drug-related: how users store their meds, keep track of when to take meds, how they get their meds from the pharmacy, how they pay for their meds and what goes wrong.

The next level down can be compared to the branch in a tree. This level explores the broader category that the product lives within. For example, in this project, taking pills sits within a broader domain of ‘staying healthy’. Both the human understanding and the user understanding rely on this broader interpretation of the situation. For example, in this project, we defined the domain experience as ‘staying healthy’. In this section, we asked participants to discuss what ‘healthy’ looked like in their heads and what their health goals were. Good design strategists tend to prioritize this understanding and always seek the domain understanding behind any user experience, though I’ve seen a lot of engineering-led user interviews that miss this level completely.

The final level is the human experience. This is the true purpose of Whole Human—to ensure that the user experience is rooted in one’s greater context as human being. For this project (and all other projects) this is defined as one thing: ‘Being’, the ideal experience of life as a human being. Regardless of the project’s subject, the same questions can always be used here: how hopeful do you feel about the future? What makes you happiest today? How would you rank your life on a scale from 1-10 and why? This is the moment the last one hundred pages have been in service of: we have finally reunified the human into its integrated whole.

Once these three levels have been agreed upon, then you’re ready to begin research. As illustrated in Figure 15, we defined interview questions around the three levels for our two-hour interviews with participants. As is typically approached in Human-Centered Design, we

started with the deepest/broadest layer—human experience—then moved to the domain experience then, finally, the user experience.

### Analysis

After our research was complete, we began the creation of a ‘Whole Human Needs List’, a three-dimensional look at the user that traces needs from leaf to trunk. We surfaced needs by using typical qualitative analysis methods; we reviewed footage, coded our transcripts and clustered like-thoughts.

At the surface level, we learned a lot about the user experience, *managing a complicated drug regimen*. We saw some commonly cited user needs, like users need help remembering to take their medications and that it’s a pain to format pill bottles into pill containers every single week. We also noticed some deeper latent needs. For instance, we learned that patients are given a list of what meds to take and how many times a day, but users end up doing a lot of work to actually turn that list into a real drug routine and lifestyle. They end up personalizing the routine to work with their lives.

Going deeper, at the domain experience, *staying healthy*, was not just about taking the right medications; in fact, that was a small part of the overall experience for a patient. We learned that patients saw pills as being the thing that gets them back to ‘functional’ but nothing more. Moreover, staying health relied on other channels: like certain foods, deep breathing exercises, taking a walk every day to prevent sleepiness or not sitting on the couch all afternoon to prevent depression. This was an important understanding to gain because it gave medication a better sense of scale and orientation to the greater domain of health.

Finally, we reached the deepest level and it was time to surface the human experience of this user. We talked with each user about their life today, their vision for their future and the amount of hope they have. Through those stories and the help of the Periodic Table of Human Elements we defined the human experience. As a reminder, the purpose of the Periodic Table framework is to help in this very moment. Understanding the human experience is complex, nuanced and answers are often unclear. In fact, I believe that not having a tool that can help us make sense out of this complexity is why we avoid this level today.

Through the data we gleaned, we ended up discussing the relevance of six Human Elements (all T-elements) that this user was missing. Given the situation of our user, homebound, frustrated, lacking hope—these individuals were significantly “trapped.” We didn’t introduce any B-elements because, keeping with Maslow, if the T-elements are strong enough, it doesn’t matter if you introduce B-elements; they will not have an effect.

Right off the bat, we selected ‘ownership of organism’ from the physiological column because we immediately could feel the pain and hopelessness that came from a chronic patient, trapped in his/her body. These people were primarily homebound, unable to have a job because of their disabilities, and prisoners to their health. One woman described it as *“not fair. I feel like I got jipped out of a life.”* Their goals for the future were things like: *“to only have one migraine a day.”* It was very obvious that the futures and their Being was trapped by their health. We also realized that pills are right in the middle of this deficiency because their side effects contribute to a lack of ownership of an organism. For example, a teacher explained to us: *“imagine teaching a class of second graders when you have diarrhea from your medication.”*

As another example, we selected ‘Evolution’ from the esteem category because we also could sense the crippling feeling of stagnation these individuals were experiencing. For



example, one woman explained that: *“It just gets old; waking up every day, taking 12 meds, hoping to look halfway decent in a pair of jeans...and then nothing changes.”*

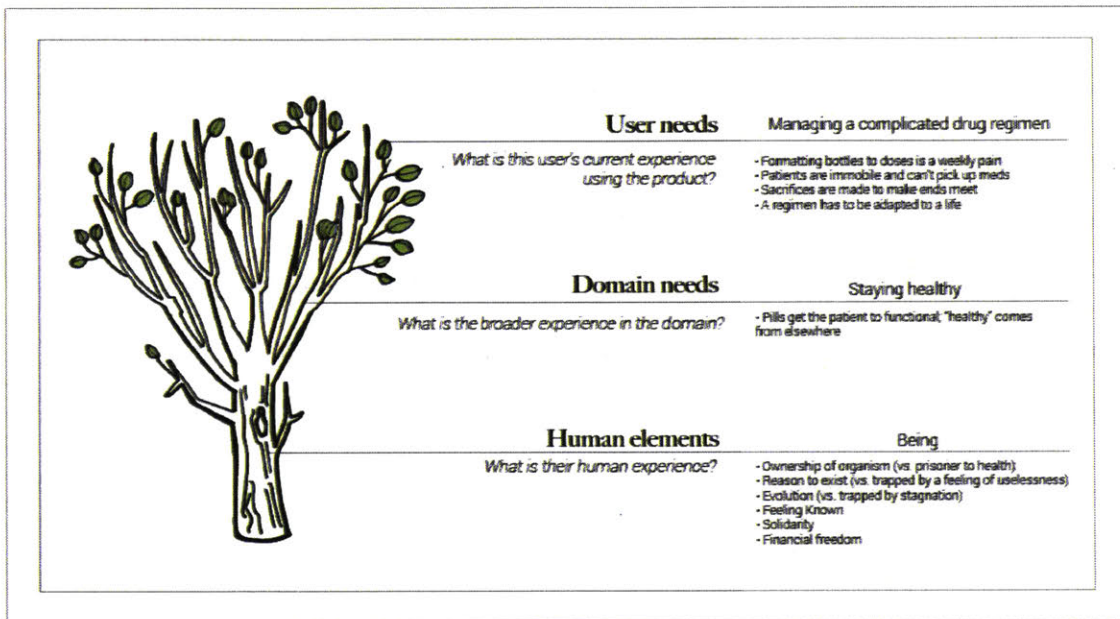


Figure 16. Whole Human Needs List.

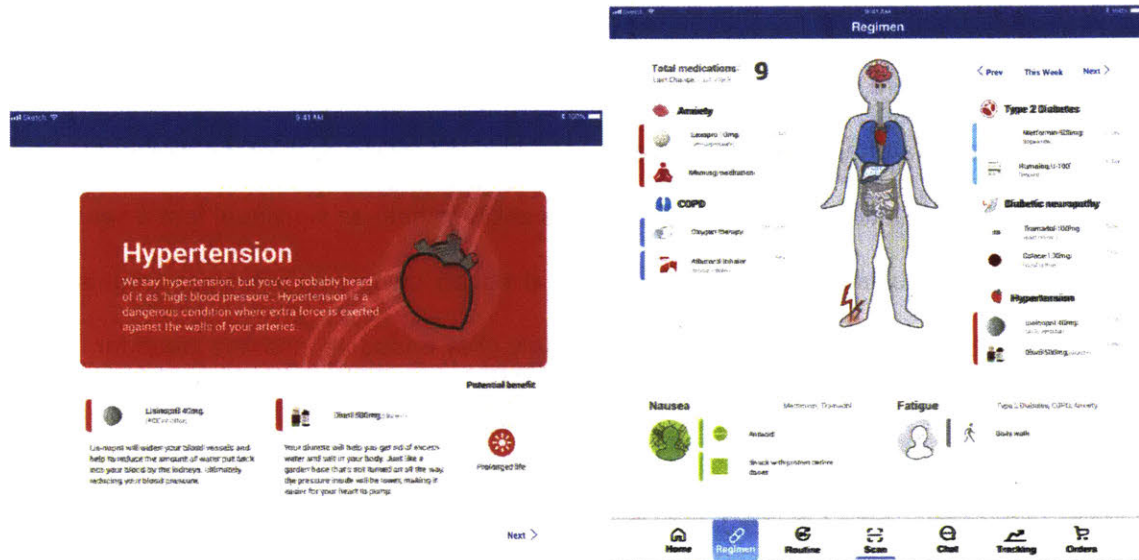
Out of the six human elements we pinpointed, we ultimately narrowed the list to the one strongest element. This prioritization is important because each human element is broad and represents very different directions for a product strategy. By adding in 3+ elements, the product strategy will lack specificity and will become too hard to accomplish. Therefore, we ultimately prioritized, 'Ownership of Organism' above the other elements for two reasons. First of all, it was, by far, the deficiency that had the biggest and most painful impact on the life of the individual. As Maslow explained, the strongest need of a human ends up dominating an organism, and this was very evident; the other elements seemed to lack as much urgency and

power. Secondly, we discussed which of the six elements were most connected to the design prompt we were focused on. While all these elements were relevant to the experience of a comorbid patient, they were not all as solvable or related to medication. Thus, we also ranked the role that medication/a pharmaceutical company can play in fulfilling each of the elements. For example, a pharmaceutical company has a lot less ability to help an individual feel a sense of 'Evolution' compared to its ability to help an individual feel an 'ownership of his/her organism'. We didn't throw the deprioritized elements out completely; they ended up inspiring ideas for other features, but the primary element, 'ownership of organism' played a much more dominant role in ideation.

### Ideation

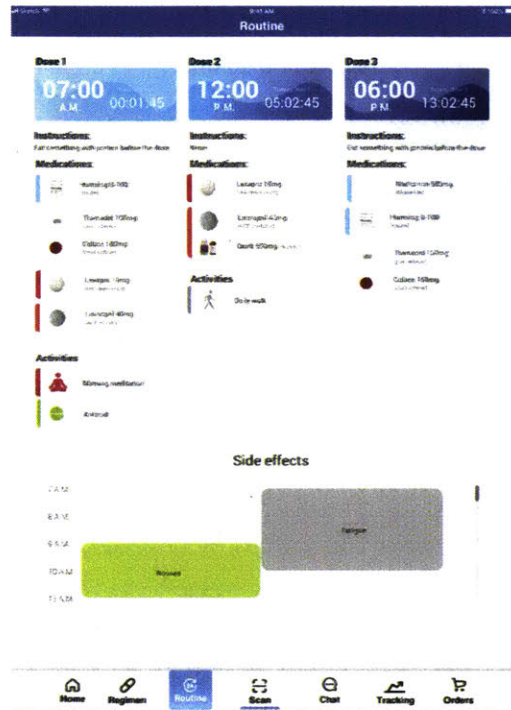
Armed with the 'Whole Human Needs List', we began to brainstorm solutions. I won't go into detail for every idea, but I'll explain how the 'Whole Human Needs List' changed the experience. I have seven years of professional experience doing HDC project and typically at this moment in a project, I have 2-3 good ideas that have come to life in my head. However, when I put them to paper, though they still make sense functionally, they lose a little bit of the spirit that made them special in my head. In contrast, when I got to this point of the process using Whole Human Design, it felt like there was a deeper and lasting soul behind the ideation. My brain was still thinking functionally, but there was a guiding spirit and the ideas presented themselves with greater vividness and purpose. I believe the Whole Human approach resulted in greater novelty of ideas, but that did not mean that the ideas were all. As an example, here are some of the ideas that were approved for short term development.

## Pill intro



We designed a pill introduction tool to help patients feel comfortable with their new regimen. In order to enhance 'ownership of organism', we showed the effect that every pill has on the body—connecting pills to condition and bodily function. We also designed a feature that shows a patient the good and bad effects that a medication will have on his/her body in order to help a patient understand what will happen after its swallowed.

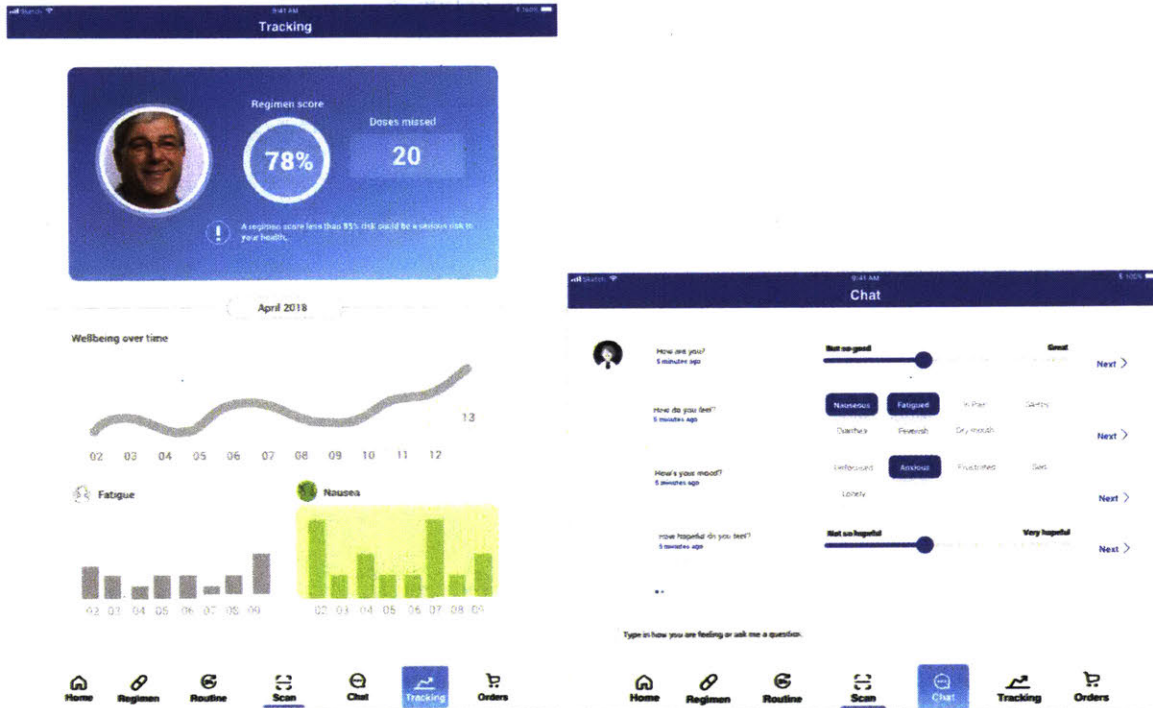
## Personalized routine



We also designed a personalized routine tool that uses an algorithm to formulate the ideal medication routine for a patient. Often times pills come with side effects like nausea and diarrhea, so the purpose of the algorithm is to preserve the most “well time” throughout a day (to minimize the amount of time that a patient is affected by a side effect.) The algorithm takes a number of inputs, including the patient’s schedule and when he/she needs to “be most on.” Furthermore, the algorithm also get a prediction of when they’re most likely to experience side effects and at what times throughout the day. Again, this feature came from our commitment to

providing 'Ownership of Organism', and it would have escaped our radar with the typical HCD process.

### Side effect tracking



Finally, we designed a side effect tracking solution that allows a patient to continuously chart how they're feeling throughout the day. This is also supported through a voice application to make the process seamless. Using this data, an AI assistant recommends additional changes to routine to help the patient feel healthier. For example, if a patient is noticed as feeling fatigue most mornings, the AI assistant might switch their medications with fatigue side effects to the

end of the day. Or it may suggest that the patient does 10 minutes of light walking every morning to get through the fatigue. Again, in service of the patient's 'Ownership of Organism'.

These were just three of the more near-term ideas that came from our ideation. They were all influenced by a greater soul of the project and intent to improve 'ownership of organism'. Even the smallest elements, like copy and visual design, were highly influenced by this ethos.

## Chapter 5: Conclusion & foundations for future work

### Review of research objectives

This thesis started by admitting that the questions it seeks to answer like “*what is a human?*” and “*what makes a human happy?*” are most likely forever unanswerable. In fact, their unanswerable nature is most likely what keeps us from designing for a deeper level of human needs today. Thus, though imperfect, this thesis sought a workable definition and model for human well-being and a process for applying it to Design. I have no empirical proof that we have accomplished that goal, and admittedly, there is so much work left to be done. Yet, after testing Whole Human Design twice, I have a greater confidence than ever that designing for a user in the context of his/her whole humanness has the power to increase the quantity, novelty, and life impact of the concepts generated.

### Future work

In the first test, in the large format workshop, inexperienced designers were able to come up with concepts that were well beyond the mundane and obvious concepts that I would have expected from the a group and format like that. Furthermore, in the second test, a real-life project for a real client, I felt a greater support as I went through the process and, having completed the project, I can look at our end product that would have been far different without the infusion of human elements. Both of these data points are completely subjective; therefore, the next step is to run a controlled experiment to test the effect of Whole Human Design compared to traditional User-Centered Design. I will do that through a within-subjects



experiment of two groups where each group is exposed to the same two prompts with different treatment.

In beginning to design the experiment, these were the prompts that we initially created.

Both had an associated client and user.

<p><b>Prompt 1</b></p> <p>Your client: <b>Bank of America</b> Your ask: <b>Find innovative products/services that can be implemented in 3-5 years.</b> User: <b>Soon-to-be retirees</b></p> <p>Your prompt:</p> <p><b>How can we help a soon-to-be retiree feel secure in his/her retirement?</b></p>	<p><b>Prompt 2</b></p> <p>Your client: <b>CMS (Medicare)</b> Your ask: <b>Find innovative products/services that can be implemented in 3-5 years.</b> User: <b>Elderly Members</b></p> <p>Your prompt:</p> <p><b>How can we help our elderly members feel secure in their health?</b></p>
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When we ran a beta test of the experiment, we asked the participants how comfortable they felt with each prompt, and unexpectedly, participants felt significantly more comfortable with Prompt 2 over Prompt 1. Thus, we will need to create a new prompt to replace the first so that these two are equally weighted and so that the true effect of the comparison of methodologies can be understood.

The purpose of the experiment is to test the difference in the control (HCD process) versus the Whole Human Design methodology in design effectiveness—measuring the quantity, variety, novelty and life impact of the concepts generated. In order to do that, we have designed a within-subjects experiment made up of two different groups. In the experiment, each participant will be given the first prompt, followed by 20 minutes to ideate and then a second prompt, followed by another twenty minutes to ideate. The first prompt that the participant



receives will come with an ordinary HCD needs list that highlights functional needs. The second prompt will be a 'Whole Human Needs List' and will come with functional needs as well as human elements. The two prompts will be swapped (as shown below) between the two groups to minimize the prompt's effect on the output.

	Prompt 1, Human-Centered Design	Prompt 2, Whole Human Design
<b>Group A</b>	<p><b>Needs list</b></p>	<p><b>Needs list</b></p>
<b>Group B</b>	<p><b>Needs list</b></p>	<p><b>Needs list</b></p>

The second piece of future work is to continue to expand and add nuance to the Periodic Table of Human Elements. The current version was built from the life experience of 50 individuals, and while I am confident in the data we collected and the meaning we synthesized, this is obviously not a fully representative sample. I believe that every project will bring a deeper

understanding of this picture, and in that sense, the Periodic Table of Human Elements is more of a life's work than a next step that can be accomplished in a matter of months. I encourage dialogue and contribution as we continue to explore the mysteries within us and the unanswerable.

Above all, even if you tell me that that this model will never be useful for others, its development has allowed me to have dive head on into our deepest mystery. It has given me the chance to connect deeply with strangers—which, without fail, had an palpable effect on my day. Finally, it has changed the way I think of life and what it means truly live one. These are all the dreams and outcomes that we hold our greatest hope for in Design. And in that sense, entering this territory may be confusing and a bit scary, but it can't be wrong. It's time we give ourselves the permission to take that step.

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