

BEING IN TOUCH

DESIGN TOOLS FOR NAVIGATING OUR INNATE HUMAN NEEDS IN THE MODERN WORKPLACE

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1. TOUCH HUNGER

“Touch hunger” describes the innate desire for healthy human touch. While this need has been studied in historically extreme situations such as solitary confinement in prisons and failure to thrive in orphaned infants, it is rarely discussed in the context of healthy adulthood. Often misunderstood as sexual desire, touch hunger merely describes the need for skin-to-skin interaction with other humans. Deficiencies from this lack of human physical contact are known to cause serious malformations both mentally and physically. In extreme cases individuals have increased predispositions for depression and other anxiety-associated mental illness, difficulty with empathy and forming long-lasting relationships, decreased embodied cognition, and increased likelihood of stunted physical development and illness (Montagu, 1986).

In the past decade, as technological communication has increasingly dominated social interaction and instances of loneliness, depression, and workplace disengagement in North America have begun to rise, touch hunger has slowly entered the conversation as a possible contributing factor. In 2010, 40-45% of working age Americans reported feelings of chronic loneliness, a nearly 30% increase from 1980 (Khullar, 2017). While a single cause for this rise is impossible to identify given the complexities of modern life, touch hunger offers a holistic mental and physical perspective that starts with the human body.

Being in Touch: Design Tools for Navigating Our Innate Human Needs in the Modern Workplace is a methodological toolset for innovative thinkers working in design and technology to understand their innate needs and gain skills to shape a future without touch hunger. Derived from design thinking, somatic theory, and improvisational games, it places the innate needs of the human body at the forefront of the conversation. *Being in Touch* serves as a framework for designers and technologists to understand these needs through workshops in safe and structured moments of exploration while pushing themselves to engage in dynamic creative thinking through body innovation.

2. A CASE STUDY OF TOUCH STARVATION IN THE MODERN WORLD

Office culture and design serve as tangible reflections of the changing values of a wider culture. With efficiency, communication, teamwork, complex sexual politics, and human relations in constant discussion, they rely heavily on interpersonal skills and empathetic communication (“Re: Work”, 2017). Gallup’s 2016 annual report on the state of the American Workplace reports nearly 70% of U.S workers as “not engaged,” a number that grows yearly as the loneliness statistic also climbs (Gallup, 2017).

Trends in the physical working environments of companies focused on technology and innovation point to rising instances of touch hunger. Blurred lines between home and work life and the synthetic intimacy of digital communication are perpetuating touch hunger. Work email and communication that takes place on personal devices creates mixed messages. Plus, the inclusion of bars and restaurants or catering services offering food and drinks throughout the day extend office hours and lead to distorted understandings of what is appropriate socially and physically in the workplace ("Re: Work", 2017). This infrastructure is in direct opposition to the necessary yet often difficult-to-apply human resource guidelines.

A tendency to move to digital communication and the propagation of systems that allow people to do so is in part attributed to a sensory bias that has long dominated the design and technology world. In the hierarchy of the senses, sight has ruled supreme (Montagu, 1986). This visual communication through language and engagement with visual devices that carry slight vibratory or haptic feedback only simulate the feeling of interaction. While they fulfill individuals intellectually, they neglect the deep innate needs of the body. This type of mind/body gap has never before been experienced in previous generations. Millennials working now have had to educate themselves on how to integrate this technology into their lives. There is no information about the long-term effects of immaterial communication on the body's understanding of itself and the senses.

The pairing of the working environment and the sensory bias that is created by visually stimulating communication devices leads to a paradox found in the design and technology world. Active designers and technologists are at the highest risk of experiencing the negative effects of touch hunger while also driving the future of technological communication.

3. THE SIGNIFICANCE & MYSTERIES OF TOUCH

From this paradox comes the theory behind *Being in Touch*: enabling workers in the design and technology industries to understand their sensory bias and recognize the innate physical needs of themselves and ultimately their users. It seeks to solidify the inherent role of touch in dynamic and creative thinking while bridging the widening mind/body gap. Through taking a stance that innovation doesn't only occur outside of the body, it proposes that the body itself has sensory capabilities we have yet to discover. *Being in Touch* seeks to teach individuals to become body innovators through techniques derived from design thinking, somatic theory, and improvisational games.

In his book "The Eyes of the Skin: Architecture and the Senses," Juhani Pallasmaa warned against a growing sensory bias in architectural education. This bias, he believed, led to a suppression of the other senses and ultimately will contribute to a disappearance of the sensory and sensual qualities of architecture in general. Pallasmaa orients the physical body as the "...locus of perception, thought and consciousness," and asserts "...the significance of the senses in articulating, storing and processing sensory responses and thoughts." (Pallasmaa, 2012, p.11) This pronouncement of the importance of the embodied experience is echoed in neurological and anthropological research.

Pallasmaa further supports a holistic design approach in building upon the work of Maurice Merleau-Ponty, stating that "life-enhancing" architecture must address the entirety of the human senses. Only with

this holistic approach are we able to “fuse our image of self with the experience of the world.” The inclusive approach Pallasmaa puts forth relies on an understanding of touch as the foundation upon which all of our senses are built. Montagu explains in “Touching” that the skin is the “oldest and most sensitive of all organs” and “Undoubtedly the first ‘sense’ to come into being.” Skin itself works as an extension of the nervous system. It is the mother of all senses in that all sensory organs accept input through layers of skin. Even the cornea is encapsulated in a thin coating (Pallasmaa, 2012, p.12-14).

The importance of the senses has a long history in the field of architecture, but in the comparatively newer field of industrial design, scholarship has yet to integrate the more esoteric elements of sense theory (Pallasmaa, 2012). Discussions around touch and physical wellbeing tend to fall into three main categories: Human factors, human centered design, and haptics. While each methodology has its own vastly different concerns, the three value logic and measurable feedback. Human centered design notably places the health of the physical body at the forefront but is independent of emotional wellbeing. Its definition of empathy is rooted in quantifiably measured feedback. Haptics, the most sensually focused of the three is popularly implemented in situations where sensation is simulated through technological means (Norman, 2013). Unfortunately when it comes to touch, measurable outcomes are surprisingly hard to come by. To engage touch thoroughly in design and technology means a level of comfort with the unknown and indefinable.

Touch, compared to the other senses, is significantly under researched. According to neuroscientist Dr. David Linden, a leading touch researcher, for every 100 papers written about sight, there is one paper written about touch. This is largely due to the highly contextual nature of the sense. An individual can be touched in the exact same place on the arm by the same person in the same manner in two different situations and have an entirely different reaction and perception of what happened. This makes it difficult to draw consistent conclusions. Furthermore, the innate nature of touch in our lives is so consistent with what it means to be alive, that it is deemed uninteresting and ubiquitous. Touch is the only sense in the big five that is required for us to survive. Linden further explains this point by attributing the lack of scholarship around touch to “a failure of imagination...Sighted people can close their eyes and imagine what it is like to be blind, but there is no way to imagine losing your sense of touch.” And it is for that reason he feels that makes it somehow less compelling.” (Linden, 2017). The division between logical and illogical thinking that Linden points to is not just isolated in the field of scientific scholarship; it relates back directly to how touch is dealt with in industrial design.

Dr. V.S Ramachandran and Sandra Blakeslee’s work in phantom limbs demonstrates the path of constant illogical and mysterious discovery when it comes to touch and the sensorial world. They paint a picture of the neurological makeup of the physical body filled with immense plasticity and surprise (Ramachandran, & Blakeslee, 1999). If logical thinking cannot be relied on to solve the serious problem of touch hunger, designers and technologists working to shape the future of human interactions must become comfortable with emotive and esoteric thinking and research methods. Further, if consideration for touch is to be integrated into situations where touch hunger is most prevalent (as with the case of the design and innovation workplace), the tools of implementation must be flexible, improvisational, and highly contextual.

4. BEING IN TOUCH METHODOLOGY WORKSHOPS

What follows are three workshops on *Being in Touch* created for workers in the design and technology fields. They are fully mediated experiences that take place in the participant's own office over the course of a week with a trained facilitator. While built in the language of team-building exercises, they employ durational improvisational techniques and are carried out during the course of a normal work week. Exercises are led before the workday begins and participants are prompted to experiment with the ideas discussed throughout their day. The workday ends with a small moment of physical engagement and reflection.

Designed to both alleviate touch hunger in the participants and inform their design methods, the workshops follow a path of discovery, creative questioning, relationship building, and personal body innovation. The exercises increase in complexity and contact, surprising participants as they move from moments of familiarity to instances of experimentation and personal challenge. Within the conversation around touch hunger, the workshops also emphasize the need for a new language around touch in the workplace. Discussion of context and consent as they relate to the exercises will help participants to navigate the cultural and political complexities and taboos of workplace touching and form their own site-specific set of skills that are appropriate and respectful to the diverse makeup of their office. Issues of race, gender, and disability will be at the forefront of the conversation and the facilitator will work to maintain a space of mutual respect, empathy, and safety.

Safety is the key to engagement and acceptance of healthy touch. Psychologist and somatic therapist Dr. Joe Weldon explained in a 2017 interview with the author that the feeling of being safe prompts the body to organize itself in a manner that is receptive and open. Humans will naturally be drawn to other humans whom they recognize as "safe." This behavior dates back to the early history of humanity when travel took place in groups and one member was constantly scanning the horizon to ensure that the environment was safe. If individuals deem a situation safe they will be more likely to be open to physical interaction, and as was discussed in Linden's work, they will more likely have a positive experience (Weldon, 2017). The idea of body organization as a response to stimuli and situational scanning will be employed and explored throughout the exercises to navigate consent and create a safe place mentally and physically.

4.1 EXERCISE ONE - THE HANDSHAKE: EVOLVING NORMS & GETTING COMFORTABLE



Figure 1. Examples of Steps 5 & 6: Creating new gestural interactions. Copyright © 2017 Ari Elefterin

Exercise One looks to handshakes as a situation in the western workplace where healthy human touch is already occurring. It seeks to engage participants in understanding the origins of the gesture and inject and ultimately amplify meaning depending on context and intent. The hand is at the center of scholarship around touch and embodied knowledge. In Pallasmaa's earlier work "The Thinking Hand" he ties the miraculous potential of the human hand directly to the mind/body gap. He states that the hand holds the key to unifying the mind and body as to perpetuate successful craftsmanship and artistic work. He explains that the process of design is highly intellectual and that it is only through union with the hand that the design materializes (Pallasmaa, 2009).

As will be customary with all exercises in the workshops, the facilitator will read from a script uncovering new information as exercise goes on. This exercise is carried out in large groups but interaction happens between only two people.

1. Participants pair up and are asked to shake hands in the "traditional" sense.
2. Participants share with their partner other ways in which they shake hands on a regular basis.
3. Facilitator asks participants to share the different situations in which handshakes take place; describing the intentions behind the handshake and what the connotations are.
4. After a period of discussion the facilitator shares that the origin of the "shake" in hand shake was to knock loose any weaponry from a stranger's sleeve as a method of protection.
5. Participants are asked to re-visit the handshake situations they detailed in step three and compare the intention with the violence of the origin of the gesture.

6. While still using the hand, participants are asked to experiment and perform different collaborative gestures that reflect the true sentiments of the situations they chose.
7. The facilitator prompts the pairs to create a set of personal handshakes for two different occasions during the workday that they will use until the reflection period is held.

Step seven looks to precedence in the world of basketball where statistics show that players who tap the hands of their teammates before a free throw, no matter how begrudgingly, perform better than those who do not. This phenomenon is further exemplified by the trend of elaborate and personal handshakes done by various teams such as the 2016 NBA Championships the Cleveland Cavaliers. Personalized to each player and done in front of the spectators during the pre-game announcements, these signs of respect and acknowledgement helped the team overcome struggles to work together as a cohesive group that plagued them early on in the season (Abbott, 2017).

The goals of highlighting and then challenging the practices of existing modalities of touch while building personal relationships help to lead into the next phase of the workshop where further complexities are introduced.

4.2 EXERCISE 2 - 3 UP CUP: EXPLORING GROUP DYNAMICS & CHALLENGING THE DEFINITION OF TOUCH



Figure 2. Examples of drinking systems for three from workshop exercise. Copyright © 2017 Ari Elefterin

Exercise Two further defines gestures of respect and intimacy in the workplace through inviting more individuals into the collective and expanding the definition of what healthy touch really is. It looks at the complexities of the social dynamic of the triad. The triad involves a constant rotation of responsibilities and acknowledgment of contribution. An understanding of shifting from active participant, to supporter, to

listener while working in a triad gives the participants flexibility and diversity of skill to apply to a wider array of workplace interactions (Montagu, 1986).

The introduction of group situations allows for an opportunity to create new gestures. Dr. Joe Weldon explains that touch is not always confined just to physical contact. There is a spectrum of sensory input that somatic therapy considers to be touch. Tone of voice, eye contact, and proximal distance can all “touch” an individual. This truth is in part what adds complexity to human resources guidelines; eye contact and tone of voice are difficult to control. As Weldon explains, sexual harassment starts way before inappropriate touching ever occurs (Weldon, 2017). For this exercise participants will explore this complexity and engage in touch activities mediated through the act of acquiring, receiving, and sharing a warm beverage such as coffee or tea. It asks the question, “What physical and material actions can individuals engage in that amplify the widened definition of touch?”

The facilitator will read from a script uncovering new information as the exercise goes on. Like Exercise One it is carried out in a large group with smaller groups working together. The facilitator provides a selection of simple solid colored cups and a variety of standard prototyping materials such as tape, foam core, chipboard, string, blades, etc. for participants to manipulate.

1. Participants first begin working individually and are given three cups.
2. Facilitator prompts the individuals to create a series of interventions in the cups that would allow them to get beverages for themselves and two of their desk-mates at the same time.
3. Participants are asked to survey the sensorial experiences of warm beverages, listing sensations ranging from sight, smell, taste, and touch.
4. The facilitator then asks participants to reflect on moments of consideration and support given to them by coworkers in the past. They repeat the sensorial survey with these experiences.
5. Participants pair off and iterate a new round of cup interventions. Cups must be carried by two people at the same time.
6. After completion of this round, groups of three are created and participants are prompted to create a series of drinking systems whereby beverages can only be acquired and enjoyed as a trio.
7. The trios are then asked to bring the most successful interventions from the three rounds back into their workspace and document situations of usage throughout a two-day period. Making note of what situations each intervention was best suited for and sensorily surveying each instance with special attention paid to their emotional feedback.

While non-physical touch does not directly satiate touch hunger, it helps to create an environment of mutual respect and safety. Understanding the complexities of non-physical touch further helps develop a new language of touch that is appropriate for the workplace.

The integration of props into the exercise also allows for designers and innovators to begin to draw connections to their everyday practice. Seeing parallels between their direct material environment and the emotional implications of such interventions helps them understand how the BIT methodology can be applied to their practices.

4.3 EXERCISE 3 - SUPPORT SYSTEMS: LEARNING WHAT SUPPORT IS & INNOVATING WITH THE BODY



Figure 3. Advanced examples of support systems innovated with the body. Copyright © 2017 Ari Elefterin

Exercise Three synthesizes the knowledge learned from the first two exercises and pushes individuals physically to understand the potential of their bodies. It is run in the spirit of trust falls, ropes courses or group yoga session, requiring a level of trust and consent. It draws clear distinctions between what types of touch are appropriate for everyday integration and which are held in specifically defined arenas.

This highlights the spirit of the work of Ramachandran and Blakeslee, recognizing that there is new information about the relationship of the mind and body that is being discovered every day. It celebrates the energy of innovation of the employees and re-contextualizes where this energy can be centered. Innovation can occur in the body as well as in external materiality, if designers and technologists can begin to build their embodied knowledge in conjunction with intellectual knowledge, their practice can move to a more holistic place.

The facilitator provides yoga mats and organizes an open space for the exercise to be carried out. While the below details the exercise run without any additional props, depending on the physical limitations and comfort of the participants, an exercise ball can be introduced as a tool for support.

1. Participants are asked to bring or find a chair or other device for sitting.
2. Facilitator prompts participants to sit on their chair 10 different ways.
3. After each participant has achieved 10 ways the facilitator prompts 15 more.
4. Upon completion of the last 15, participants are asked to identify a partner in the space and to collaborate on 10 more ways to sit together.
5. Facilitator with the help of an assistant talks participants through the idea of weight giving and receiving. Participants begin to transition from a focus on sitting to engaging in basic methods of supporting each other with their bodies while still using the chairs as props.
6. Facilitator asks participants to recall the different material support systems in their lives. The group does a sensory survey of these objects and discusses how they are emotionally integrated into their lives. This is all carried out while participants are giving and receiving each other's weight.
7. The facilitator then prompts the participants to begin to expand upon their weight giving and receiving by removing the chairs. Participants start to create more obviously supportive forms to reflect the existing support objects in their lives. They should be iterating around 20 versions of this.
8. As they near the 15 mark, the facilitator asks everyone to stop using speech as a tool for negotiation.
9. Upon completion of the 25, the groups are invited to join and combine forces to create larger networks of support systems; there should be 25 new iterations from each group.
10. After completion of the last 25, groups are invited to share their favorite 5 with the entire workshop.

Body innovation is perpetuated by the idea of iteration. Through repetition and duration designers and technologists can again see parallels to their personal methodologies. By pushing the physical body in this manner the mind/body gap becomes smaller as individuals build embodied knowledge and spatial awareness. This type of learning helps reveal the power of the physical user as an equal participant with a designed object or piece of technology. New innovation does not only need to occur in the product; it can happen with the user as well.

5. LONG TERM APPLICATION

With designers and technologists at highest risk for experiencing the negative effects of touch hunger, while simultaneously controlling the future of our material world, *Being in Touch* serves an immediate and real need. While in theory it recognizes some of the negative effects caused by the integration of technology into our communication, it is by no means an anti-technology methodology. Rather, it seeks to help designers and technologists more holistically understand both their own physical bodies and in turn their users. At a high level, the long-term goal is the promotion of more mindful technological innovation that prioritizes the innate health of the human body to help humanity to not to lose connection to the dynamic possibilities of physical world. The workplace setting and exercises detailed in this paper serve as a foundational building block for how to tackle Touch Hunger in design. *Being in Touch* hopes in the future to extend to other areas of extreme touch alienation such as prison systems and educational infrastructure.

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