SOCIETY OF DESIGN THINKING PROFESSIONALS

NEWSLETTER

Society of Design Thinking Professionals Newsletter

FOUNDER'S SPEAK

Few things shape the human experience as profoundly and pervasively as creativity. Creativity propels human advancement in every discipline, from the arts to the sciences, economics, and technology.

As the field of Neuroscience continues to evolve, we are starting to see more and more Neuro-esque terms popping up – NeuroLaw, NeuroBusiness, NeuroEconomics, and Consumer Neuroscience.

Any idea what NeuroDesign is?

Neuroscience + Design Thinking –– is an exciting new space that deserves our attention. Neuroscientists have learned a lot about how the brain's visual systems work and how they can be used to help user experience experts, creatives, advertisers, designers, and marketers (or anyone who creates images for work) optimize and increase engagement and appeal of their design or product.

In our pursuit of innovation, we have embraced the powerful fusion of Neuroscience and Design Thinking. By integrating these disciplines, we tap into the depths of human cognition and creativity to create transformative solutions. Neuroscience provides valuable insights into how the brain functions and perceives the world, while Design Thinking offers a human-centered approach to problem-solving. Together, they empower us to design AI solutions that are not only intelligent but also deeply resonate with users on a cognitive and emotional level.

Moving forward, we will deep dive to understand how Neuroscience meets Design Thinking and opens up a new world to boost productivity and enhance customer engagement.

Stay tuned...

Dr. Jimmy Jain
Founder
Society of Design Thinking Professionals

Editor's Speak

Stepping into the vibrant tapestry of this community, I have woven together an intricate understanding of empathy—for users, and its importance in understanding their needs and ethical concerns. This personalized understanding forms the basis for crafting solutions that resonate authentically with users. While I look ahead in the context of the fusion of Neuroscience and Design Thinking, it completes the missing puzzle rack as it ensures that the solutions we craft are truly meaningful. As an example, by integrating Neuroscience, we gain valuable technical insights into how the human brain functions and perceives the world. This knowledgeable perspective allows us to design various interfaces and interactions that align with users' cognitive processes, resulting in intuitive and seamless experiences.

The fusion of Design Thinking and Neuroscience holds possibilities to unlock new horizons in understanding cognitive mechanisms and emotions. We can enable emotionally intelligent foundations in various Industries that comprehend and respond to users' feelings, fostering deeper engagement and empathy. It propels us into a future where technology is not only intelligent but also deeply attuned to human experiences. It empowers us to create AI solutions that are not only technically advanced but also emotionally engaging, delivering exceptional user experiences.

Feel free to write to me at **afreen@sdtp.co.uk**, in case of feedback, input, or if you want us to cover any specific topic.

Afreen Fatima
Content & Community Manager
Society of Design Thinking Professionals

The Synergy of Neuroscience and Design Thinking

The convergence of Neuroscience and Design Thinking holds immense potential for enhancing user experiences. By understanding the intricacies of how the brain processes information, makes decisions, and engages with technology, we can design AI interfaces and interactions that align with users' cognitive processes. Design Thinking, with its empathetic and iterative approach, complements Neuroscience by providing a framework to uncover users' needs, pain points, and aspirations. This combination enables us to create AI systems that are both technically advanced and emotionally engaging, delivering exceptional user experiences.

Enhancing User Experiences through Neuroscience and Design Thinking

Design Thinking and Neuroscience are catalysts for innovation. By uniting designers, data scientists, and neuroscientists, we leverage their collective expertise to create AI systems that are not only technically robust, however, also deeply attuned to human experiences. Neuroscience insights shed light on the brain's cognitive mechanisms, emotions, and memories, guiding the design of AI interfaces and interactions. Design Thinking methodologies, grounded in empathy and collaboration, ensure that the resulting AI systems address users' cognitive and emotional needs, fostering trust and engagement.

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SDTP
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1. Cognitive Design

Unveiling the possibilities of integrating Neuroscience and Design Thinking to create AI interfaces that align with users' cognitive processes, resulting in intuitive, efficient, and seamless interactions.

2. Emotional Intelligence

Examining how the synergy of Neuroscience and Design Thinking can lead to emotionally intelligent AI systems that understand and respond to users' emotions, fostering deeper engagement and empathy.

3. Ethical Considerations and Neuroscience

Navigating the ethical challenges of merging AI and Neuroscience, and showcasing how Design Thinking can guide responsible and transparent AI development practices.

4. User-Centered Design

Showcasing real-world examples of user-centered AI systems that have successfully leveraged the integration of Neuroscience and Design Thinking to deliver exceptional experiences across diverse industries.

5. Neuroergonomics

Unlocking the potential of Neuroscience and Design Thinking in optimizing the design of workspaces, products, and environments to enhance cognitive performance and well-being.

Unlocking the Potential:
Real-World Examples

One exemplar of the successful integration of Neuroscience and Design Thinking is the development of a brain-computer interface (BCI) that enables individuals with paralysis to communicate and interact with the world.

By combining insights from Neuroscience on brain signals and cognition with Design Thinking principles, the BCI provides a seamless and intuitive user experience. The system interprets users' neural activity, allowing them to control external devices and communicate their thoughts effectively.

This transformative solution, born from the synergy of Neuroscience and Design Thinking, showcases the profound impact that understanding the human brain can have on designing AI systems that empower and enrich lives.

Dr. Srini Pillay is the CEO of NeuroBusiness Group, an organization that specializes in developing transformational leaders, voted among the Top 20 "movers and shakers" in leadership development by Training Industry. He is a Harvard trained psychiatrist, brain-researcher and certified master executive coach. He combines his expertise in all three fields to develop custom approaches to help senior leadership teams improve strategic speed, confidence and resilience, facilitating change, enhancing agility, and boosting productivity and creativity.

Design thinking infused with insights from neuroscience can revolutionize problem-solving by harnessing the complexities of the brain.

How can Neuroscience facilitate the process of innovation in Design Thinking?

Neuroscience can help innovation in Design Thinking by shedding light on the unconscious factors that obstruct innovation, as well as providing frameworks for intervention. Design thinking is both an analytic and creative process, neuroscience helps to understand both aspects of it and their impact.

Innovation in the brain relies on various processes e.g., analogical thinking and metaphoric thinking. Neuroscience provides the frameworks to enhance this. In addition, innovation relies heavily on possibility thinking and a growth mindset. Neuroscience can help address obstructions to possibility as well as critical questions that enhance existential confidence (e.g., "what if?" questions help innovators shape reality from their commitments rather than the other way around.). We use a survey called "**The Possibility Index**" to measure obstructions and catalysts for possibility, and thereby, innovation.

Is there a way to bring neuroscience together with Design Thinking?

Neuroscience can provide frameworks to:

Empathize: By relying on an understanding of the brain science underlying a user's intrinsic motivation to use the product (e.g., what would help the user feel more autonomy, competence, and socially connected?)

Define: By relying on frameworks for cognitive and emotional empathy.

Ideate: By relying on frameworks to reduce fear to encourage ideation as well as frameworks for enhancing ideation (e.g., the use of metaphor to be more creative).

Prototype and test: By relying on frameworks on the brain science of agility.

How can Design Thinking practitioners enhance their knowledge from a neuroscience perspective?

Neurocoaching® can help Design Thinkers deeply understand processes that underlie innovation. I've written the following resources that can help begin the process:

Tinker Dabble Doodle Try: Describes how innovation can be enhanced by turning on the default mode network.

How to train your brain to innovate: Shifting from probability to possibility activates the brain's navigation capability, akin to a "growth mindset."

The innovation show: Focus and unfocus to unlock the power of creativity.

Seeing people as possibilities: Creating a culture rooted in possibility thinking that encourages striving, openness, and creative solutions.

Your Brain can only take so much focus: Excessive focus exhausts the focus circuits in your brain. The article delves into many simple and effective ways to activate this circuit in the course of a day.

Your brain and business: It illuminates the rapidly-emerging links between modern brain science and the corner office -- neuroscience and leadership.

Can you give an instance to understand the profound comprehension of the intricate workings of the human brain and its interplay with Design Thinking?

*Research indicates that creativity (e.g., the ideation process in design thinking) is highly dependent on the interaction between the "idea generation" and "information organizing" networks in the brain. *Studies also show that at a certain point, stress can impair this connectivity in the creative brain. Conducting a design thinking process while in a state of stress is counterproductive and it can diminish the effectiveness of the process.

To help mitigate stress we have designed *CIRCA and *Reulay (brain-based apps) to provide on-demand brain-based stress reduction when stress obstructs creativity. CIRCA uses brain-based cognitive techniques and Reulay uses brain-based video to reduce stress, and in the process, enhance creativity.

*Another example of the interplay between the brain and design thinking relates to the fact that the ideation phase may benefit from enhanced analogical thinking – employing the use of analogies. When you increase the semantic distance (e.g., the difference between an app that you are creating for "caring" and a corresponding analogy such as a mother, bodyguard, or house), this increases the activation of the frontopolar cortex and enhances innovation.

Source

Tinker Dabble Doodle Try: *https://www.amazon.com/Tinker-Dabble-Doodle-Try-Unfocused/dp/1101883650/ref=tmm_hrd_swatch_0?_encoding=UTF8&qid=&sr=*
How to train your brain to innovate: *https://www.businessinsider.com/harvard-professor-explains-how-to-train-your-brain-to-innovate-2017-3?IR=T*
The innovation show: *https://irishtechnews.ie/the-innovation-show-podcast-focus-and-unfocus-power-your-creativity-with-dr-srini-pillay/*
Seeing people as possibilities: *https://www.dukece.com/insights/seeing-people-as-possibilities/*
Your Brain can only take so much focus: *https://hbr.org/2017/05/your-brain-can-only-take-so-much-focus*
Your brain and business: *https://www.amazon.com/Your-Brain-Business-Neuroscience-paperback/dp/0134057775*
*Research: *https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6034981/*
*Studies: *https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7662463/*
*CIRCA: *https://circa.world/*
*Reulay: *https://www.reulay.com/*
*Another Example: *https://pubmed.ncbi.nlm.nih.gov/19383937/*

NeuroDesign:
Illuminating the Human Experience

Neuroscience and Design Thinking is an innovative approach that combines the knowledge and insights from neuroscience with the human-centered problem-solving methodology of design thinking. This integration allows us to understand the intricacies of human behavior, cognitive processes, and emotions, and apply them to the design and creation of solutions that truly resonate with people. By leveraging the principles of neuroscience and design thinking together, we can unlock new levels of empathy, creativity, and transformative potential to address complex challenges and shape a better future for individuals and organizations.

"It is through the convergence of Design Thinking and Neuroscience that we unlock the true potential of bridging the gap between technology and meaningful experiences."

– Dr. Sarah Smith, Neuroscientist, and UX Designer

"By blending neuroscience and design thinking, we can tap into the power of the mind to create transformative experiences and shape a better future."

- Dr. David Eagleman, a Neuroscientist at Stanford University

"The marriage of neuroscience and design thinking enables us to understand and address the subconscious drivers of human behavior in innovative ways."

- Dr. Amantha Imber, Founder of Inventium