

September 25, 2025: Working Doc

This is a space for people to share comments/ideas based on the readings for the week.

- [Introduction and Chapter 1 \(Design Ability\)](#) from *Design Thinking: Understanding How Designers Think and work (2nd Edition)*. By Nigel Cross.
- [Summary of Chapter 8 \(Understanding Design Cognition\)](#) by Nigel Cross, excerpts from Chapter 8 of his book *Designerly Ways of Knowing*.
- *How Designers Think: Nigel Cross Interview on the A is for Architecture Podcast* (Links to episode on [Spotify](#), [Apple Podcasts](#), [YouTube](#)).

Questions/ Comments/Insights - keep them brief and to the point.

Yaqin

Question #1: The structural engineer Ted Happold said his main talent was living in an "area of total uncertainty"(Cross, 2023, p. 13). As novices, how do we develop the "degree of bravery" needed to let our "lines of thought"(Cross, 2023, p. 15) remain parallel for longer without getting stuck or overwhelmed by the ambiguity?

Alex:

Comment: Throughout these readings and listening I was thinking about cognitive apprenticeship and social constructivist learning models that ask people to be aware of and communicate their decision making- making the knowledge in practice explicit and the challenge of understanding what it is you're doing. Self-knowledge and introspective practices seem directly important for developing frames that can make the tacit explicit. Similarly the sort of holistic domain knowledge of designers seems to demand another kind of awareness of not only domain but self in relation to the domain and the world. A comfort with uncertainty for problem solving and a comfort in the relative mutability of the world both also entail some radical repositioning of self<> systems. These seem to be rather large cognitive demands. I wonder how these kinds of demands are accounted for when learning about design (I can trace your moves but I'm curious about the thinking before them and how the demands of getting to the frame for thinking are accounted for) and how a reenvisioning of educational aims with central concern for design-thinking orientations might require a realignment of not just priorities but whole conceptual schemes and assumptions around educations functions and processes.

Frederick

1. Cross talks about two kinds of “design thinking.” The first looks at how designers actually think and work. The second is a newer version used in business and social innovation. He favors the first, research-based view. What reasons support that choice, and what could be lost or gained by using the newer methods from business, education, or social innovation?
2. If abduction is really the main way designers think, what proof is there that it drives design work and not just a nice metaphor? And how can teams strike a balance between creative intuition and careful analysis to ensure their ideas are not merely explained after the fact?
3. Cross argues that emergent features in sketches can productively reframe problems. How do we distinguish genuine emergence from wishful seeing or confirmation bias when drawings “talk back”?
4. Designers are said to keep options open and tolerate ambiguity late into projects. When does this practice conflict with deadlines, budgets, or regulatory constraints, and how do experts time their commitments?
5. Cross argues that sketching and other external representations are central thinking tools (“graphicacy”). Does this emphasis risk marginalizing non-visual modalities or disciplines where drawing is secondary, and how should curricula adapt?

Kavya: How can we trust insights from single case studies (like Schön's) to represent authentic design practice? The gap between laboratory observations and real-world design work seems significant.

What makes sketching so cognitively powerful compared to digital tools? Is there something about the physical act or the ambiguity of hand-drawn marks?

