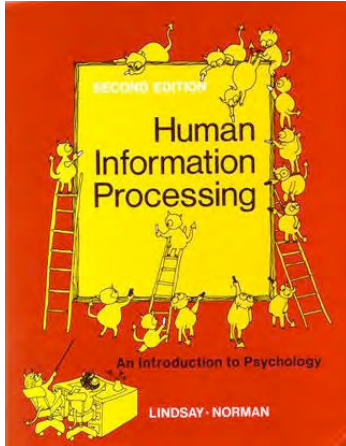




2018 Rockwood Memorial Lecture



# Adventures in Representation: A Lifetime of Struggle



## Don Norman

The Design Lab, UC San Diego

Wednesday, June 13, 2018

4:00 – 6:00 pm (Refreshments at 3:30 pm)

Qi Auditorium, Atkinson Hall

University of California San Diego

**Abstract:** I reflect upon my struggles to understand mental processing, starting as an electrical engineer (circuit theory and analog electrical networks), moving to mathematical psychology (stochastic models) and state diagrams, signal detection theory, semantic networks, good old-fashioned AI (GOAI), schema theory ([GUS](#) – natural language processing via GOAI), and early neural networks (Rumelhart, McClelland, Smolensky, Hinton). Then I gave it all up to figure out how to design things people could understand: mental models, affordances, mappings, distributed cognition, knowledge in the head and the world, and embodied cognition. I've done lots of theoretical work, seemingly important, now forgotten and irrelevant. Today I'm famous for doors you can't open (yeah: join the 4.5 million folks who have seen this 5-minute video – <http://tinyurl.com/z7vblef>). As a designer, I find deep learning disturbing because it can't explain itself: I'm hoping Judea Pearl's work on causal logic will help– will it?

**Bio:** Don Norman joined the just-formed UCSD Psychology department in 1966, coming from his first job at Harvard, where at his first faculty meeting his work was denounced by B.F. Skinner. He eventually became chair of the UCSD psych department and then co-founder and first chair of the Cog Sci department. He retired in 1993 to become a VP at Apple. He has been an exec at HP, is Principal of the Nielsen Norman group (emeritus) and then Prof. of Computer Science at Northwestern where he co-founded the Segal Design Institute. Along the way, he wrote 18 books translated into 20 languages, got three honorary degrees, is a fellow of far too many societies, a member of the National Academy of Engineering, and so on. Today he is best known for his books "Design of Everyday Things" and "Emotional Design," but he is famous for the "Norman door".

**About Rockwood:** The annual H. Paul Rockwood Memorial Lectures are endowed to the Institute for Neural Computation by Mr. and Mrs. Jerome Rockwood in memory of their late son's interest, studies, and work in the neural computation field. Paul Rockwood received a B.S. in Computer Science from UC San Diego in 1980 and a second B.A. degree in Psychology in 1981. In 1983, he started a company, Integral Solutions, to develop universal language translation, but died tragically in a mountaineering accident before he could fulfill his promise.

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