

**Design 2025 Initiative**  
**Design Educators Committee — DEC**  
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Paul Pangaro, PhD  
Chair and Associate Professor  
MFA Interaction Design  
College for Creative Studies  
Detroit MI

*Meredith Davis gave an opening introduction to the panel via video, and her script had been distributed in advance.*

*Opening Panel — 8 Minutes allocated for each speaker*

Thank you for your kind invitation to be here. Meredith's comments are insightful, clear and important.

She's right to bring up Thomas Kuhn. The shift in paradigm for design is the result of larger shifts. Kuhn focused on paradigm shifts in science – and today we are seeing a shift in the way science is done. A shift from sampling data and making a theory, to continuously measuring data – AND continuously acting on it. This is revolutionary.

This shift opens new domains for us. New possibilities. They are manifest in engineering and then in new products. For example, Amazon Alexa, Google Home, and the like.

These are not 20<sup>th</sup> century products. Nor are they merely objects. They are not merely digital computers. They are also a NEW paradigm – what Jodi Forlizzi calls product-service ecologies – SYSTEMS – systems of hardware, networked applications, and human services.

The new domains they open should frighten us – and offer hope. We've already seen that the new platforms have the power to influence national

elections in the UK and the US. Indeed they offer the potential for new kinds of interaction, for more nuanced, more subtle interaction, more akin to human conversation. Though there is still a wide gap between our interactions with machines and human-to-human conversations.

So, thank you, Meredith, for bringing up the current paradigm, and for all that you do for the design community.

As [our panel chair] Aaron said, I moved to Detroit, roughly two and a half years ago, to chair a new department of interaction design, granting MFA degrees in a two-year program. I came with the charter to recast the curriculum.

Much of my work at College for Creative Studies has been understanding what designers will need to know over the next 30 years. What will make them “literate” in design. Literacy is the competency to read (comprehend) and write (create or extend) in a given domain.

So, what are the literacies necessary for the future of design practice?

Well... The first one is SYSTEMS.

Clearly this room is full of experts in grid systems, way-finding systems, identity systems, and more. In addition, design needs to be concerned about systems that come from computing technology and its role in human as well as technology-to-technology communications — When these go on steroids, as they have recently, and include objects and sensors and big data and more, we call it the Internet of Things or even the Internet of Everything.

These systems are ruled by digital paradigms. The predominance of these technologies argues for coding literacy for designers — designers should “grok the logic of digital” and know how to code, if only to get the job that would go to a coder-plus-designer rather than just a designer. So, literacy of the rules and limitations of digital CODE.

The Internet of Things and cloud computing are catch-all phrases which bely the power of the platforms that invade our lives so thoroughly, Google, Facebook, and Amazon AND also the Leviathan of economic value-creation provided by the countless advantages in moving bits rather than atoms. Surely designers need some literacy in the power of PLATFORMS.

Then there are the natural biological and ecological systems, and the systems of human organizations, and the interactions and awareness of unintended consequences that comes from all their many entanglements. Once the domain of design expanded from form-giving to creating systems that support human interactions, systems literacy becomes a necessary foundation for design.

At CCS our interaction design program is a human design program, and I want to emphasize that I mean this beyond simply human-centered design. That phrase is, at least, a commitment to a class of research, and also a commitment to ethical values, to include users in the design process and even, please, to bring design to a future ideal state, where users are able to design, for themselves, their own future, to design who they want to be and who they may want to become. But now I want to juxtapose the idea of systems and the idea of human agency, which requires a methodology beyond vanilla systems modeling, or even “systems dynamics” and the wonderful work of Donella Meadows. In a recent paper Hugh Dubberly and I offer an extended syllogism that argues, starting from design, that we must embrace systems, which must include modeling systems with agency — that is humans and possibly also certain configurations of AIs — which then must encompass intersubjectivity (that is, “problem framing”), landing finally squarely on the need for conversation, in design. So a compression of our argument is, if we want to design, we need the literacy of CONVERSATION.

Only from conversation comes agreement, and only from agreement comes the coordination of action that we call society. The wicked problems of today, or even just the highly complex ones, require collaboration to agree on what we’re trying to do, that is, collaboration to agree on goals.

This requires conversation, and a richness of points of view in the conversation.

To put it another way, design IS conversation.

There are formal and specialized ways for talking about the nature of conversations and the range and depth that a conversation must bear to yield effective designs. The technical term for this is VARIETY – the key factor in resilience -- and to understand the variety needed in a conversation for designing is as important as having designers IN conversation. Let's call this the literacy of collaboration, or the taking seriously of “collaboration as a practice.”

So, literacies of systems, including human agency and purpose; code; platforms, and collaboration.

I'd like to close by answering the question, to what end? What do we as designers want from our designing?

I construe design, as creating conditions for who we want to be, and for who we want to become. Call this facilitating users, people, anyone, to design their own lives.

In today's important entanglements, designers must engage in conversation, to explore what is possible and decide what is preferable — what we want to conserve and what we want to change, individually and collectively. So, too, would anyone who wishes to design their own lives.

So in summary, my main point for the future of design education would be to recognize that, just as design IS conversation, it is our role to educate other designers to design FOR conversation — for everyone.

Thank you.

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