International seminar

Creative Digitality: Practices and Approaches in Arts, Design, and Humanities

Wednesday, **May 14, 2025**

Salle 0.010, **Bâtiment de Recherche Nord**
Campus Condorcet
14 cours des Humanités, 93300 Aubervilliers

Public transportation:
Metro station: Front Populaire Ligne 12
Bus station: Saint-Gobain, bus 139 and bus 239

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Introduction

In a broad sense, it is often implied that the practice of digital media (from writing/reading to drawing/viewing, designing/using, creating/experiencing), involves the use of electronic devices. According to this logic, digital devices have been considered the ineluctable material support that allows anyone to become an artist, a scientist, and a designer. But, to what extent is creativity dependent on digitality?

This seminar intends to explore a variety of perspectives that are encompassed by the umbrella term "**the digital**", building upon experiences from the arts, the design, and the humanities. Although it is not the purpose of the seminar to define or to circumscribe theoretical territories, it remains relevant to consider some associated terms that have been used to characterize the properties of the digital.

One of those terms is of course **the analog**. While the analog is continuous, the digital is based on breaking this continuity into discrete, countable units. The analog is not opposed to the digital; rather, it operates under its own epistemological regime -one of continuity and flux, often embodied and associated with affect, aesthetics, and ethical ambiguity (Galloway 2021).

In the digital realm, units are distinguishable—often binary in their simplest form—and can be assembled into complex structures through digital systems. This capacity for assembling more complex structures relates closely to the notion of abstraction. **Abstraction** refers to general ideas, formal systems, and symbolic frameworks. In practice, it often involves writing code rather than physically wiring circuits, or employing algorithms that apply broadly to multiple cases. By contrast, the inseparable counterpart to abstraction is **the concrete**, which entails specific implementations, material realities, and embodied practices. For instance, it manifests in the actual execution of code on particular machines, the experience of interacting with an interface, or the tangible and visual outputs of a digital process.

The computational

According to media theorist Alexander Galloway (2021), **the computational** involves algorithmic processing, mechanical execution, and formal procedures. Within this framework, computation can be understood as a closed system with defined inputs, rules, and outputs.

In the 1930s, British mathematician Alan Turing imagined a hypothetical machine that could read and write symbols on a tape, follow a finite set of rules (like an algorithm), and move step by step to transform input into output. Such a machine could, for example, sort lists, simulate physical processes (provided they adhere to precise rules), or encode and decode information.

What distinction can be made between the digital and the computational? While computation relies on digitality, there are digital forms that are not necessarily computational. Galloway points out that digitality is present in artifacts like a written alphabet or a musical score -both having symbolic rule-based elements, and thus **digital in structure**. Moreover, they are readable and interpretable, yet they do nothing unless inserted into a computational system. Does the computational depend on execution? Or does merely being representable to a Turing machine make something computational?

Interestingly, Galloway proposed **the uncomputable** to describe that which escapes formal computation: discrete yet unsolvable phenomena. It might involve internal contradictions, undecidability, or paradox—factors that prevent predictable outcomes. Galloway situates the uncomputable closer to meaning, affect, ambiguity, cultural context, and intuition.

How can we approach the digital, the computational, and the uncomputable? In his opening keynote at the Digital Humanities conference in 2014, sociologist and philosopher Bruno Latour drew special attention to **the materiality of the digital**. He emphasized that the digital lies within a socio-technical environment and the way to engage with it is by locating what is observable about it.

What visibilities can we observe? Are they the visual manifestation on electronic devices, screens, projections, and reflections? The tangible effects on our bodies -light, sound, prolonged sitting, calluses from using a laptop? The perceivable impacts on the environment and other species? Or ultimately, the material infrastructures such as cables, waves, data centers, satellites, mines, and industrial waste? How to observe these varying scales, geographies, and times?

As a cultural form, the digital has shaped both behavior and perception. Software, for instance, is not only technical, but also rhetorical, grammatical, logical, and aesthetic (Sack 2019). In turn, the digital is shaped by how it is translated across these domains—in interface design, programming language syntax, conditional structures, algorithms, computation models, formalization, graphics, layout, visual structure, and user

experience. In light of this, one way to proceed is to engage with software as interpreters, critics, and creators, beyond the roles of user or programmer.

Why is it important?

The seminar interrogates conceptual boundaries and **challenges theory with practice**. As users and inhabitants of an increasingly digital world, it is critical to question the familiar technology that surrounds us, not to take it for granted, and to open the black boxes (Sack 2013). Since software itself functions as a series of translations of ways of thinking, we must understand what gets translated, transformed, and potentially erased in the process (Sack 2019).

From an **ethico-phenomenological practice**, rooted in experience and agency, the standpoint of artists and creators with algorithmic means opens up diverse ideas. To code is not about displaying one's technical prowess, but rather about intervening in a field of meaning, presence, and ambiguity (Torre 2021). In other words, artistic code is not about optimization, but about subjective engagement and critical positioning.

In the context of art, **computational poiesis** has been described as the making of aesthetic forms through procedural and generative means (Carvalhais 2016). Algorithmic procedures function as creative constraints—both as material for design and as collaborators in artistic processes—and invite enactment, variation, and improvisation. One example is the use of noise as raw material and loops as an aesthetic form (Kuhn 2023). In this case, noise is not filtered out but celebrated, and loops become a sort of grammar for computation's self-performing behavior.

As a tool for **speculative computing**, computation can serve as an engine of controlled indeterminacy—enabling structured yet evolving compositions. In a practical example aimed at making climate processes emotionally perceptible, some key strategies include translating numerical models into sonified and visual forms, embracing real-time interaction so that data and visitors alike shape the output, and employing arithmetical recombination to generate structured variations in music and visuals. "Data becomes sound, movement, rhythm. Computation reveals the invisible time of climate change" (Di Bartolo & Hautbois 2022).

In the domain of digital humanities and interface design, computational tools are framed as **augmentations of human inquiry**. In Arnold & Tilton's practice, creativity emerges from designing methods and models, interpreting unexpected results, and reframing traditional questions through visual patterns. For them, the goal is not to automate interpretation, but to expand it — to see with and through computational methods (2023).

Program

9:00 - 9:30 - Welcoming participants

9:30 - 10:00 - Opening - Everardo **Reyes** (Université Paris 8, FR)

10:00 - 10:45 - Giuseppe **Torre** (University of Limerick, IE)

10:45 - 11:30 - Miguel **Carvalhais** (Universidade do Porto, PT)

11:30 - 12:15 - Discussion

12:30 - 13:30 - Lunch

13:45 - 14:15 - Florent **Di Bartolo** (Université Gustave Eiffel, FR)

14:15 - 14:45 - Arthur **Kuhn** (Université Paris 8, FR)

14:45 - 15:15 - Discussion

15:15 - 15:30 Break

15:30 - 16:15 - Lauren **Tilton** & Taylor **Arnold** (University of Richmond, USA)

17:00 - 17:45 - Warren **Sack** (UCSC, USA) (Zoom talk live from Santa Cruz, CA)

17:45 - 18:15 - Discussion

18:15 - 18:30 - Closing

References

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