The fundamental concern of the international « Digital ecologies » symposium is to question the terms and conditions of an « ecological » approach through contemporary design practices. It rests on the idea that ecology is inseparable from the study and protection of nature, and consequently must be understood in every sense as a relational, dynamic and complex approach which can be applied to artificial environments, in particular the digital one which has become the environment associated with our lives.

As such, the broadening of ecology applied to digital technology is not an acclimatization of the technique which would make digital objects autonomous beings, living within ecosystems isolated from the toxicity of the industrial conditions of their production, the considerable energy consumption through their use, and the harmful effects of their destruction. Nor is this a way of basing the exit of the ecological crisis on the exclusive development of digital technologies, according to a naive technicism which would relegate the modern myth of progress in the « society of knowledge » thanks to the power of calculus, simulation and reticulation of computational rationality, all this in spite of the transformation of knowledge into merchandise, the increase of free work and the generalization of individual and collective control which it establishes by the automatic treatment of « big data ». On the contrary, it is a matter of undertaking a true criticism of (post- or hyper-) modernity, following thinkers like Bateson, Simondon, Illich, Guattari, Bergue and Stiegler. Indeed, these philosophers have demonstrated the relevance of a general ecology to surpass the classic alternatives between naturalism and humanism, humanism and technicism, humanism and environmentalism, which limit the understanding of the complexity of the ecological crisis as well as the success of the measures offered to solve it.

From this « generalist » perspective, it is therefore a question of ecological plurality or spreading several levels and dimensions in the study, criticism and creation within the digital environment of our lives. More precisely, in the capacity of digital technology moving henceforth towards transforming all the relations between Earth and mankind, and between mankind, artefacts and human beings themselves, it seems determining to question the ecological impact of digital technology on a material as well as a psychological, social level and a cultural, ethical as well as political one. It is according to such a multidimensional and systemic approach that design could thus help to understand what digital technology implies in the creation processes on the whole, and lay the foundations of overcoming the opposition between militant ecology (radical design) and lying advertisements (« greenwashing »), according to a critical yet complex ecological path developed by the industry at the end of the 1990s. For this approach solely concentrates on objects (the analysis of their lifespan, the norms applied to them on conception and the ecological ethics to adopt), without questioning the principles of industrial economics nor integrating the « immaterial » dimensions which are the representations, images, symbols that design takes responsibility for and which participate directly in the awareness of the ecological crisis and the users’ acting out. In this regard graphic design is considerably important. If the ecological conditions for conception and dissemination are still not studied enough, elsewhere graphic design proves to be particularly important for the development of an ecology of knowledge capable of reducing the harmful effects of cognitive capitalism and the mindful economy through critical experimentation of the measures of shaping and spreading knowledge (editorial design), the man-machine and machine-man relationships (interactive design), interoperability and trans-mediacy (computational design).

In this symposium, it is therefore not only what computing does to design but especially what design can do to and for computing, so that it can be less destructive for nature just as for the mind, for things just as for the environment, without which there is no creation possible, nor worthy and ethical existence for the human community.

To introduce this first reflection on the « digital ecologies » in the field of design, several lines are put forward without considering them isolated from each other, as their facts are in correlation and must be thought out in synergy. The final aim is understanding the effect of their interaction, but their distinction allows to show each approach defines a specific ecosystem which deserves a particular study by the complexity it already reveals. Each approach therefore presents a series of themes which the symposium invests and questions through the conceptual and practical means of creation in design.
1) MATERIAL ECOLOGY: RESOURCES, RISKS AND ALTERNATIVES

Material ecology concerns several aspects peculiar to design practices, whether product design or graphic design work. It connects the exploitation of resources, the energy consumption, the storage and waste produced by the whole lifespan of products just as the flow of data. The perception of the ecological risk has transformed conception and production methods, just as it involves a new way of questioning the uses by urging the elaboration of alternatives; it also calls for a question on the risk representation modes for designers and users.

- products: extraction and transformation of resources (unusual lands, precious metals, plastics); energy for food and storage for use, data storage, waste treatment and elimination.

- infrastructures: electric, fibre optic, Hertzian and satellite networks for energy and data transport; data centres and air conditioning

- methods: eco-conception; eco-materials; recycling, circular economy; « Green » digital information and communication.

2) PSYCHOLOGICAL ECOLOGY: CAPTURE THE MIND AND KNOWLEDGE DESIGN

Psychological ecology concerns the effect of computing on human minds, which transforms perception, learning, attention and knowledge but also the identity and presence, so the whole personality of individuals just as groups. Graphic design is in particular involved in its issues by the conception of interfaces, information design and the visualisation of data, uses of interactive and transmedial interfaces through new editorial modes.

- perception: interaction between computing and sensitivity (synaptogenesis et organogenesis), orchestrated perception; augmented perception (VR)

- learning: image and language; simulation; interactive learning media; serious games

- focus: deep concentration and emotional hyperstimulation; economy vs mindful ecology; exploitation of desire (Playbor)

- knowledge: signal; information; knowledge; information design; analog vs digital reading; reading, translating, interpreting machines; algorithmic robots; hypertextuality; participation; knowledge sharing (wiki)

- identity: offline and online behavioural traceability; identity externalisation (declared, active and measured identity); multiple identities (avatars, heteronymous; identity theft)

- presence: mobility and ubiquitous presence

3) SOCIAL ECOLOGY: TRANSFORMATIONS OF IDENTITY AND EXCHANGE

Social ecology concerns the transformations of inter-individual relationships and the new modes of insertion, search engine optimization, belonging, friendship and exchange produced by the new digital sociability. It is as much a question of new forms of meeting, uniting, matching, dialogue and collaboration as forms of control, dissociation, confrontation, exclusion, and isolation as well as new styles of work and economy.

- social performance and digital social networks
- community management
- participatory and collective creation
- mindful economy and community control
- consumer work; free labour
- alternative economies; circular; functionality; convivial; sharing; donation and barter

4) POLITICAL ECOLOGY: NEW FORMS OF EXPLOITATION AND CONFLICT

Political ecology examines the new forms of exploitation and conflict sprung from the digital reticulation of knowledge and the motivations enabled by the web and social networks. More precisely, it concerns as much the reactivation of socialist utopias and historical communities as the new forms of transferring production and responsibility to consumers, or still the temporal and spatial stakes of conflict between offline and online.

- globalisation of critical theories (post-colonialism, post-feminism, post-partisan)
- new militantism
- reappropriation of personal data
- control
- algorithmic governmentality
- democracy and internet
- ethics: biocentrism, ecocentrism, deontology

SCIENTIFIC COMMITTEE

Jacqueline FEBVRE (Dean)
Ludovic DUHEM (Philosopher, Head of research)
Emmanuel CYRIAQUE (Publisher, Visual Design Coordinator),
Gunther LUDWIG (Art critic and exhibition curator)
Caroline KASSIMO-ZAHND (Multimedia designer)
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Fabrice FLIPO (Philosopher, Institut Mines-Telecom)
The call for international communication is open to all researchers, French or foreign, in exact science and social studies disciplines, designers, architects and artists.

**SUBMISSIONS MUST**
- be drafted in French or English
- present a summary of the presentation in 3000 characters maximum (spacing excluded)
- specify the approach or approaches concerned by their presentation
- contain the submission author’s institutional membership
- give the author’s personal contact details (email)

**CALL FOR COMMUNICATION SCHEDULE:**
- Call for communication circulation date: 15 June 2017
- Deadline for sending propositions: 22 September 2017
- Deadline for definitive selection of propositions: 9 October 2017

The propositions for communication must be sent to:

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