

## Call for applications for a doctoral contract

### *Artificial intelligence devices and algorithmic data processing in culture: industrialization and regulation*

The present call for a doctoral contract focuses on the theme of artificial intelligence (AI) devices and algorithmic data processing in culture. Considering the deployment of AI devices and the algorithmic processing of data from the point of view of industrializing culture is at the heart of the work carried out within Section 1 of the Laboratory of information and communication sciences (LabSIC): "Cultural, educational and creative industries". Specifically, this subject refers to the strategic orientation of digital platforms, since AI devices and algorithmic data processing present platforms with major challenges. Given the above, LabSIC and the Laboratory of Excellence "Cultural Industries and Artistic Creation" (Labex ICCA) have been the first to conduct various research projects from the perspective of Big Data (Thuillas and Wiart, 2019; Ithurbide, 2019; Bouquillion, 2019) and algorithms (Chevret-Castellani and Labelle, 2019, 2020, 2021; Bénistant, Chevret-Castellani and Labelle, to be published in 2022). In order to extend this research, LabSIC is proposing that the Sorbonne Paris Nord University offer a doctoral contract on the challenges of AI devices and the algorithmic processing of data in culture.

This theme is highly topical at the global scale, with scientific works currently addressing the above issues from different angles, placing these devices more or less at the heart of their questioning. Authors in the field of Infrastructure Studies, including L. Parks and N. Starosielski (2015), see the material conditions of the distribution of information as the major question, while the usual themes of political economy (the conditions of production, circulation, access, consumption, public policy and regulation) are considered irrelevant. These approaches result in emphasis being placed on the relationships between various protagonists all competing to exert a dominant influence on how technology is developed. How the various "layers" that make up a medium are constructed, from submarine cables to terminals for end users, is approached from this perspective. The AI in algorithmic devices is therefore only considered as one of the media layers. Ignoring the specific features of the cultural industries, one of the key figures in Platforms Studies, A. Helmond (2015), considers platformization to be a paradoxical movement organized by platform operators -the only ones able to analyze user activity- to both decentralize platform functionalities and recentralize through data control. This phenomenon is linked to what these authors call the "programmability" of platforms.

"Platform capitalism" research, including that conducted by N. Srnicek, places AI and algorithmic data processing devices at the heart of the new form of capitalism which, according to said author, is currently emerging alongside "platformisation". Algorithms are believed to affect the decisions of agents, suppliers and customers, and thus platforms are not the neutral devices that some authors would assert, including the theoreticians of Multi-Sided Platforms (MSP) (Hagiu, 2007). On the other hand, platforms would be at the center of business models. From this perspective, unlike previous capitalist models, both Fordist and post-Fordist, platforms are built to maximize interactions between users and thus data collection. Hence their use in multiple fields of activity. According to these approaches, the modes of operation employed by the cultural industries would lose their specific characteristics. Authors whose approaches are inspired by critical thinking, including N. Smyrniotis (2016) and J.C. Miguel and J. Izquierdo-Castillo (2019), consider that the mastery of algorithmic information processing devices enjoyed by the Big Five (Google, Apple, Facebook, Amazon) strengthens their powers. N. Couldry and U. Meja (2018) analyzed the evolution of data and the grip that large-scale capitalist actors have over them from the perspective of colonialism. Similarly, based on a South African case study, M. Kwet (2019) posited that the

United States has managed to reinstate colonialism through the major industrial players in digital technologies.

Many studies that more specifically address the cultural industries have adopted some of the points of view presented above. Thus, for around ten years now AI devices and algorithmic data processing have been presented as a revolution in various economic fields, including culture, and in social and political life (Cardon, 2015). The experts in and promoters of these technologies have raised high hopes. Combined with platforms, these devices would make previous methods of intermediation obsolete and offer consumers the products and services they expect (Drumond, Coutant and Millerand, 2018), even when they have not expressed their expectations. Thus, many studies have attempted to measure the effectiveness of these systems, particularly from the point of view of recommending cultural content to consumers (Beuscart, Coavoux, Maillard, 2019). Industrial players aim to emphasize the marketing argument of intensifying the user experience: personalization, improving the discovery of content and facilitating cultural consumption. New and considerable sources of income are thus released. On the other hand, other research points to dangers associated with AI devices and the algorithmic processing of data, including threats to the control of cultural consumption and confinement in filter bubbles and privacy, in particular through the collection of personal data, or threats to democracy (Pariser, 2011). The advent of a surveillance society can thus be feared (Mattelart, 2008).

The doctoral project will integrate the above perspectives, in particular by studying to what extent and how AI devices and algorithmic data processing construct a storytelling with effects of self-fulfilling prophecies weighing on the effective deployment of these devices. It will take into account the current debates around this much-discussed notion of "artificial intelligence" promoted by public actors (Annex 1). The project will be able to question how these discourses address the issues that AI poses for the cultural industries. The doctoral project will focus on the more specific issues relating to the industrialization of culture, referring to modifications at work at different levels of the cultural sectors. All cultural sectors are affected by the deployment of these devices - from the collection of usage data, metadata and "hybrid data" (Farchy and Denis, 2020), to their algorithmic processing- from the cultural industries (books, recorded music, cinema and audiovisual, press and information, video games) to the less industrialized activities, including the performing arts, visual arts, heritage and museums (Bullich, 2016).

Upstream of the sectors, what are the challenges for creation and production? For example, one of the questions that arises here is whether AI devices replace human work in content design (Joux and Bassoni, 2018; Bullich, 2018). To what extent do such devices help create and produce the considerable amount of "short" or low-cost content that platform operators need? Similarly, the way in which these devices participate in the sorting of content, particularly according to whether or not they respect intellectual property rights, may be questioned (Bullich and Guignard, 2014): How is the permanent renewal of the pool of artistic and creative talent (which is a central historical constant of cultural activities) now taking place thanks to systems based on algorithms? How does artistic creation using "artificial intelligence" impact this pool of talent and what are the implications for copyright (Annex 2)? Who are the actors at the heart of these new forms of renewal? How do major players coexist with smaller specialists in certain segments of AI devices and algorithmic data processing? On the side of the cultural industries, what issues are there for members of the fringes (in the context of these industries comprising a few actors from the oligopoly and myriads of actors from the fringes, also referred to as "independent actors")?

Further downstream of the sectors, the questions at the heart of the research could, for example, be linked to issues raised by recommendation systems. Do they encourage a wider dispersion of cultural consumption among a greater number of titles offered? Indeed, one of the constants of the cultural economy is the low dispersion of consumption in relation to the number of different

titles offered. Beyond their effectiveness, do they constitute a guarantee of quality in the eyes of consumers and, thus, to what extent do these devices reassure consumers and thus constitute a factor of differentiation between the products offered by the various platforms? Similarly, research may focus on the effective valuations that devices allow, and in particular on challenges they present in the struggle to capture added value. Indeed, mechanisms are established for capturing attention amid manifestations of “media circulation power”, directing consumers towards certain content to the detriment of other productions (Hesmondhalgh and Lutz, 2020). Do those actors who create or produce work and content benefit more or less than those who distribute, and in particular those who own the platforms? In short, do AI devices and algorithmic data processing strengthen the position of the communication industries (Web, electronic equipment, e-commerce, telecommunications players) vis-à-vis the cultural industries (Farchy, Méadel and Anciaux, 2017)? Or, conversely, do they give culture and cultural industry players a new chance with respect to the communication industries (Bouquillion, 2020)?

Finally, proposals will address issues of public policy and regulation (Chevret-Castellani and Labelle, 2019, 2021), and mention French Law n° 2016- 1321 of October 7, 2016 “for a digital Republic”, which promotes the principles of loyalty and transparency for platforms. How do public policies, today at the European level, integrate AI and algorithmic data processing devices? How do independent administrative authorities and independent French and European public authorities position themselves? How is the regulation of the “data-driven” economy conducted in the cultural industries? Industrial players, who seek to escape regulatory constraints, are quick to point out that these AI and algorithmic data processing devices would (according to them) make previously implemented policies obsolete, and especially those which highlight the cultural exception, as is the case in France. Cultural diversity would thus be “naturally” ensured, including the defense of national or local productions. This is the type of argument put forward by American industrial players confronted, for example, with 30% quotas for European works since the audiovisual media services directive of November 14, 2018 (Annex 3).

It is understandable that AI devices and the algorithmic processing of data raise broad questions, as they are now integrated within cultural activities. However, the central axis of the doctoral project should focus on questions of cultural industrialization, particularly in reference to approaches and methodologies in the information and communication sciences and research relating to the theory of cultural industries, including those carried out within LabSIC. Similarly, proposals must position themselves in relation to the work carried out within Labex ICCA.

The doctoral thesis will be supervised within LabSIC by Philippe Bouquillion, whose work focuses on the cultural and creative industries, and Christine Chevret-Castellani, whose research addresses public policies and digital regulation.

The recruited person will be welcomed within LabSIC and be able to participate in the scientific activities organized by members of the laboratory, in particular seminars. This person will also benefit from the doctoral training of the Erasmus Doctoral School (<https://erasme.univ-paris13.fr/>) and that of Labex ICCA (<https://icca.univ-paris13.fr/>), of which LabSIC is a founding member. The recruited person will also be able to attend Labex ICCA seminars and summer school. Scientific exchanges centered around the PhD theses in progress within Labex and engaged in by doctoral students, post-doctoral students and professors-researchers specializing in the various disciplines represented within Labex are particularly formative.

Furthermore, a workspace may be offered in the offices allocated to LabSIC on the Condorcet Campus. In addition to working facilities, the Condorcet Campus (<https://www.campus->

condorcet.fr/) will offer opportunities for scientific sharing, in particular with the LabSIC partners based there.

Applications will be in the form of a single pdf file written in Arial 11 and contain the following:

- A cover letter including a professional career plan.
- A CV (maximum two pages).
- A presentation of the thesis project (15,000 characters maximum).

If applicants are doing a Master's degree, a letter from the supervisor should be attached guaranteeing the constant progression of the work, and the thesis defense must take place before June 25. The results of the Master's (grades and average) must be sent to the secretary's office of the Erasmus Doctoral School no later than the same date.

Candidates are invited to contact Philippe Bouquillion ([p.bouquillion@free.fr](mailto:p.bouquillion@free.fr)) and Christine Chevret-Castellani ([christine.chevret@univ-paris13.fr](mailto:christine.chevret@univ-paris13.fr)); final applications must be sent to the following address [direction.labsic@univ-paris13.fr](mailto:direction.labsic@univ-paris13.fr) by 12.00 p.m. on May 16.

The laboratory will undertake the pre-selection of candidates on the morning of May 19.

The candidate preselected by the laboratory will be interviewed by the board of the Erasmus Doctoral School on June 17.

## References

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## Annexes

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