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# Five central concepts to think of Digital Humanities as a new digital humanism project

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The development of computational technologies and the expansion of digital media have led to significant transformations from a social, political, cultural and epistemic point of view. Digital Humanities, as a field of research, critical reflection and action, has become one of the key players in this transformation process. On the one hand, it is contributing to its own development; on the other, to its critical analysis. In this way, the practice of Digital Humanities helps us to expand contemporary society by interweaving it into the new means of accessing, producing and disseminating knowledge, but it also raises awareness of its constraints, disparities and uncertainties. The 3rd International Conference of the Hispanic Digital Humanities (HDH) International Society<sup>1</sup>, held in Málaga from 18 to 20 October 2017,<sup>2</sup> wanted to focus its attention on this crucial role played by Digital Humanities from three fundamental dimensions: societies, politics and knowledge.

Taking this conference and its framework question as a starting point, the Editorial Committee of *Artnodes. Journal on Art, Science and Technology*, in collaboration with the

1. <http://www.humanidadesdigitaleshispanicas.es>.

2. <http://hdh2017.es>.

HDH and Local Organising Committee of HDH2017, decided to dedicate a monographic issue to address these issues in order to bring together the most relevant contributions that were presented at the 2017 conference, as well as other contributions that could enrich and expand the topics under discussion. Although the call for contributions received a wide-ranging response, the necessary selection process led us to limit the number of contributions to 17. Consequently, this special issue and its extension in number 23 are not intended to be exhaustive, nor do they offer a complete overview of all the knowledge, methodologies and issues that make up the Digital Humanities field today which, due to its heterogeneity and range, would be impossible in a journal of this kind. The objective of this monographic issue is to offer a set of studies, analyses and research that allow us to better understand some of the ways in which the field of Digital Humanities is now headed, while pushing us to ask ourselves questions of real substance. The selection of articles, in addition to the suggestions outlined by the reviewers, also aim to represent the thematic, methodological and geopolitical diversity that defines this field as far as possible. Likewise, we wanted to move towards a broader and less text-centric view of Digital Humanities, by incorporating the actions and processes of artistic creation as part of its praxis and epistemic universe.

Now, what do we mean exactly when we talk about Digital Humanities? What does this term really encompass? This is a difficult and complex question. There are many definitions that have been formulated and continue to be formulated, which proves its heteromorphic nature. The ways in which Digital Humanities are understood and practised are highly heterogeneous, varying according to the disciplinary, geographical and cultural contexts. Therefore, achieving a standard definition or representation is almost impossible. Perhaps, for those who are approaching this field for the first time, it suffices to say that Digital Humanities, based on the convergence of computational technologies, digital media and humanistic knowledge, constitute the space of critical thinking and action in which we can debate the techno-episteme that defines our contemporaneity and the socio-technological ecology of our time in relation to the cultural events of Humanity. In other words, if we assume that technology, knowledge, society and culture are components that are mutually interwoven, co-evolving over time, Digital Humanities signify nothing more than the response to a need to think critically and intervene directly in the processes related to the production, interpretation, dissemination, consumption, appropriation, reuse, preservation and documentation of cultural knowledge about the past, present and future of Humanity, taking into account the techno-epistemic and socio-technological conditions that correspond to our historical context.

In this context, the areas of interest in the articles that make up this special monograph include the exploration of quantitative methodologies for the dynamic analysis of cultural production and

the extraction of unpublished knowledge from databases and digital collections; the approach to epistemological and methodological problems associated with constructing said repositories of cultural information, including questions about the design of strategies linked to specific territorial spaces, as well as questions about their sustainability and future reuse. The adoption of methodologies that make it possible to analyse cultural phenomena on multiple scales and levels and, therefore, to adopt a more polyhedral approach, are also subject of attention; the critical discussion on the notion of inter- and transdisciplinarity and its integration in the development of technological infrastructures; the redefinition of archival practices in contemporary socio-technological ecology; the revision of the new dimensions of temporality from techno-artistic practices; and the adoption of techno-political resistance actions related to difficulties in accessing digital infrastructures in non-hegemonic contexts.

However, and despite the difficulty of providing a standard definition with which the global community of digital humanists completely agree upon or can feel fully represented, it is necessary to specify some key aspects of Digital Humanities in order to avoid erroneous interpretations. The growth that this field has experienced in recent times, particularly in Spain, where congresses, seminars, projects, postgraduate courses, etc. dedicated to Digital Humanities have multiplied, has had a very beneficial effect by placing the focus of attention on studies and initiatives that until a few years ago were on the periphery of academic research. But it has also led to some inherent problems with this rapid expansion, ranging from scepticism and resistance to the unknown, to trivialisation, through lax use of the term, or opportunism and academic instrumentalization. I will limit myself to pointing out two aspects that I consider key for a better understanding of what Digital Humanities are and, therefore, for a better interpretation of the theoretical-methodological framework in which the articles that make up this special monograph take on meaning.

First of all, Digital Humanities are not a “technical matter” or, as Dominique Vinck states ironically, “an adventure for passionate writers who immerse themselves in a set of computer tools” (Vinck 2018, 143). The contribution of Digital Humanities is not confined to a set of analysis techniques based on computational methods; or to a series of “digital products” that help research. What Digital Humanities provide us is, first and foremost, a horizon of thought from which to approach the analysis and interpretation of cultural facts and processes from a different perspective. Therefore, the practice of Digital Humanities is not limited to an issue of which technology we apply or what resources we create. The core issue around which Digital Humanities revolves is how we reformulate the fundamental questions that we have raised up to now about the cultural and historical development of Humanity; and how we face the problems and circumstances of its evolution, past, present and future, from a new techno-epistemic and socio-technological paradigm.

In accordance with this approach and therefore, secondly, Digital Humanities are not based — or should not be based — on simply importing technologies developed in other fields in a type of dynamic of acculturation, but on the development of frameworks of thought and the design of hybrid methodologies that allow us to explain the new complexities of our world, thus enabling a more complex approach to our past and a prospective vision of the future. It is precisely the inherent overlap between technology, society and culture, to which I referred earlier, and the difficulty of establishing net boundaries between them, which defines Digital Humanities as an intrinsically inter- and transdisciplinary space; a space of convergence of knowledge in which humanists, sociologists, anthropologists, scientists, computer experts, mathematicians, technologists, artists, designers, communicators, etc. collaborate. Digital Humanities are based, therefore, on a collaborative logic, on an intellectual and methodological fusion that, by overcoming the simple juxtaposition of knowledge, seek to configure a new space of epistemic production which, it must be said, still requires development and consolidation. Yet, it is this hybrid nature that causes Digital Humanities to have no niche and to be difficult to fit into the traditional academic structures and the institutional system of knowledge that still prevails in some countries such as Spain. This is also the cause of a response of alienation that has been prompted in some researchers who do not find the reading and interpretation codes in these studies that are common or expected in a certain “field of specialism”. In this regard, I trust that the selected articles will help to broaden the understanding of this field.

As has been said, the areas of research and the epistemological, critical and methodological problems to which Digital Humanities are trying to respond are numerous. Is there, then, a common horizon that confers unity as a humanistic project? In order to avoid turning this introductory text into an endless list of issues to be addressed, I will indicate the five central concepts that, in my opinion, are key in the configuration of Digital Humanities as a project for the construction of a new digital humanism. Keep in mind that, like any other discipline or field of study, Digital Humanities are not an end per se. Its ultimate goal is to contribute to what we all aspire to — or should aspire to — a better, more sustainable, fair and equitable world, through a deep understanding of what we have been, what we are and what we aspire to be; and through an ethical commitment that enables critical interpretation in transformative actions (D’Souza 2014, 22).

1. The first concept has to do with the development and expansion of a production/dissemination system of knowledge acquired in hybrid ecology in which the human subject has ceased to hold a central position. We must ask ourselves, then, how our understanding of cultural facts is transformed in the framework of a system in which humans and non-humans (algorithms, neural networks, programming languages, coding systems) are jointly involved in

the production of knowledge. We must also ask ourselves how the intellectual mechanisms that we have traditionally used in our research work (comparison, classification, categorization, description, association, etc.) are transformed when they are carried out to computational devices without “apparently” direct interaction by the human subject; and, in particular, we must ask ourselves what effects this transformation can have on the configuration of a new paradigm of cultural analysis. Under this framework for reflection, and assuming that computational devices and humans are guided by different rationalities, two of the main challenges we must face in the immediate future are: first, the creation of comprehensible interfaces that mediate between algorithmic outcomes and our possibilities for intellection; and second, the reconciliation between computational logic and human cognition so that mutual feedback helps us move towards a better understanding of ourselves as a species; of the world that we inhabit; and of the culture that we produce. This process of reconciliation should be considered from a dual perspective; that is, in a critical sense, being aware of the inherent limitations of computational devices and their non-neutral character or, in other words, being aware of the cultural and ideological representations that are embedded in them; and also in a proactive sense, looking for contexts in which we can hybridize the traditional production of knowledge with artificial intelligence processes, computational creativity, machine learning, new media practices, etc. (Rodríguez Ortega 2018).

2. Since the dawn of time, the production and dissemination of knowledge has been mediated by technological materialities, and it is not the first time that the human subject has become aware of the crucial role that these devices play in the construction, representation, interpretation and distribution of knowledge. However, the Internet era and the emergence of computer tools seem to have sharpened a new awareness of the intrinsic link that exists between technological devices and knowledge production/dissemination processes. In this context, the practice of Digital Humanities has broadened the sphere of a humanist’s action where, along with what has traditionally been considered an activity in its own right, “intellectual production”, has also integrated the creation of new instruments that are used to develop their research work and cultural analysis (digital resources, data repositories, digital libraries, analysis systems, linguistic corpora, user interaction platforms, etc.). This scenario involves complex aspects that need to be addressed. First of all, the warning given by Johanna Drucker in 2009 about the need for humanists to become directly involved in the development of these technological devices — from being mere users to developers/generators — in order to avoid leaving the future of the production/dissemination of humanistic knowledge in the hands of third parties, is still valid and requires a certain pedagogy. It is still thought that the construction of digital resources and infrastructures is a mere matter of technological

application that has little or nothing to do with “intellect”, thus obviating all the epistemological deployment that is inherent with it and on which they are built: from conceptual modelling to the development of metadata structures for the codified description of cultural objects, leading onto many other issues that I cannot entertain here. Secondly, if — as I have indicated previously — we are aware that technological devices have embedded cultural representations and convey ideological assumptions, it is necessary to deepen the understanding of their agentic nature, that is, in the mediation they exercise as modellers of knowledge and of sociocultural behaviours. A question that necessarily involves critical consideration of the role played in all this by the digital humanist as the new “maker” of these technological mediations. Thirdly, the fundamental dependence that has occurred in our era between digital devices and the “potential” of production/dissemination of knowledge repositions relationships of power in a new framework and forces us to rethink subalternity and cultural hegemony from a new perspective. In other words, it forces us to ask ourselves who is in control of these technological materialities that make the production/dissemination of knowledge possible today; who is in possession of the economic resources and the knowledge to create and build them; how do they determine who can and cannot participate; and what new subordinations are being generated. In the same vein, the fact that, in our time, most of the knowledge is produced or distributed digitally entails new ethical commitments that place the notion of open knowledge at the heart of the problem. At present, we are witnessing a clear process of commercialisation, capitalisation and privatisation of knowledge, which is contributing towards an increase in existing structural inequalities on a global scale. As it is directly involved in the production of this digital knowledge and the infrastructures that support it, the practice of Digital Humanities carries a special responsibility. Consequently, it seems clear that the projection towards a more equitable, fair and rebalanced world depends on our ability to build a sustainable socio-technological ecosystem based on open knowledge, on the sharing of knowledge, and on the optimisation of economic and technological resources using a transversal and horizontal approach. This circumstance leads us to think in terms of interoperability, standards, extensive application models, open and reusable data, etc. under the principles of solidarity and co-responsibility. How to advance towards the achievement of this ecosystem, and how to rebalance the processes of standardisation that we need with the preservation of particular identities, represent two of the great challenges to which Digital Humanities must contribute in the immediate future.

3. Many of the methodologies that are currently applied in the field of Digital Humanities are closely related to the new data economy that defines contemporary society and to the possibility of processing large amounts of cultural information. In fact, this aspect of research is part of a general change associated with the quantitative shift

that all realms of our contemporary life have experienced. Without undermining the interesting perspectives that this approach provides for an unprecedented understanding of large-scale cultural dynamics and the complexity underlying them, which is impossible to achieve otherwise, it is necessary to address some key issues. Thus, it is necessary to consider how to condense the quantification, measurement, objectification, mathematical calculation, statistical models — constituted now in crucial values for interpreting cultural complexity — with the problems of uncertainty, subjectivity and vagueness that characterises the traceability of cultural processes over time. We must also work on the construction of new frameworks of understanding in which these quantitative instruments are capable of producing really significant knowledge from the point of view of interpreting cultural events and processes. In fact, this need for harmonisation leads us to develop new hermeneutics in which the potentials of the quantitative and the mathematical formulation are combined with the prospect of critical inquiry itself in the humanistic field. In this way, exploring, designing and developing appropriate measures for the quantitative characterisation of cultural events and processes, in close collaboration with experts in Computer Science and Mathematics, should be one of the main tasks on the agenda for humanists over the next few years.

Along with this, other issues are extremely important: what biases are embedded in the data sets currently available? How does this contribute to the perpetuation of stereotypes and prejudiced views? What are the black holes of cultural heritage that are not available for analysis and therefore run the risk of becoming invisible? What are the differences in accessing, using and reusing data between countries and institutions? What inequalities are created? How can we move towards a global ecosystem of open and reusable data that we can all share freely and democratically, as indicated in the previous section? And what could be the new forms of regulation that advocate an ethical, responsible and sensitive use of data, under whose framework we feel safe?

4. For some time now, Digital Humanities has incorporated the approaches of critical theory of culture, institutional critique, post-colonial and feminist theories, de-colonial methodologies, etc. into its framework of thought. Thus, for almost a decade, Digital Humanities has strengthened its role as a critical discourse and instrument of emancipation against cultural, geopolitical and gender subalternities. This is an aspect on which we must continue to act, by integrating the ethical commitment of theory with practice. Likewise, Digital Humanities must serve as a tool to face the challenges that Humanity faces in this century. In this sense, it is about exploring how we can use the available digital resources, and how we can design and implement new technological tools to address the crucial issues of post-digital societies from innovative perspectives. I have already mentioned the necessary critical discussion on the man/machine

relationship or on the data-centric paradigm. Jointly, it is necessary to focus on the impact of cultural processes on the environment and its sustainability, especially those related to hyper-technology; the dialectic between geopolitical configuration and distributed cultural communities; the construction of new fluid identities; the processes of cultural circulation on a global scale and its impact on the reconfiguration of local contexts and vice versa; the existing connections between the geopolitics of political-economic power and those of knowledge; the new regimes of exclusion, etc. All this must be approached in a back-and-forth motion where the inquiry into our cultural history serves to imagine a present and a better future; and the projection of a potential future offers us new perspectives for a more in-depth understanding of our evolution over time.

5. Finally, it is necessary to implement mechanisms that enable literacy and full digital training. The development of digital resources and infrastructures is of no use if we do not know how to use them in an innovative and creative way; and there is no use in producing cultural knowledge based on great technological sophistication if we do not know how to interpret it and it is completely unintelligible for the society at which we are aiming it<sup>3</sup>. This literacy and training must include a sharpening of our critical awareness about the nature of

the knowledge we produce and about the infrastructures that make it possible in order to make responsible and ethical decisions. This is an urgent matter that compels us to rethink the curricula of academic degrees that are taught at universities and to develop an articulated system of studies that respond to the needs of a new generation of humanists and cultural researchers.

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3. I thank Amelia Sanz Cabrerizo for calling my attention to this tension (technological sophistication vs. digital skills), which we will have to deal with extensively in the coming years.

## CV

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Nuria Rodríguez-Ortega is Professor of the Art History Department at the University of Málaga, where she teaches courses in digital humanities, digital cultural heritage and digital art history. She is currently the director of the iArtHis\_Lab (<http://iarthislab.es>) research group. Its main purpose is the development of Digital Art History in the Spanish context. She also promotes and coordinates ReArte.Dix (<http://reartedix.hdplus.es>), the First Artistic Culture Digital Studies International Network in Spanish-speakers countries, and is President of the Sociedad Internacional de Humanidades Digitales Hispánicas (HDH) (<http://www.humanidadesdigitaleshispanicas.es>). Nuria Rodríguez-Ortega has vast experience leading international digital projects in the field of Art History and Cultural Heritage. Among them, worthy of note are the pioneering project Digital Mellini: Exploring New Tools & Methods for Art-historical Research & Publication, in collaboration with the Getty Research Project; and the Exhibitium Project ([www.exhibitium.com](http://www.exhibitium.com)), devoted to enhancing studies on art history exhibitions from data science and network science perspectives. She is the author of numerous books and articles on digital resources for the history of art and cultural heritage, and their theoretical, critical and methodological problematic issues. She is also engaged with the design of new curricula to promote the digital training of students and the scholar community, and has led several seminars on this topic, such as the Digital Art History Summer School (DAHSS), a joint initiative of the University of Málaga and UC Berkeley.