Ain't No Way Around It: Why We Need to Be Clear About What We Mean by "Digital Humanities"*

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Digital humanities (DH) has gained the dubious reputation of struggling to define itself. Articles trying to define DH have become something of a genre—however, more often than not the conclusions boil down to “DH is undefinable” or even “DH must not be defined.” A question that is rarely addressed, though, is *why* DH is supposedly undefinable. In this paper we argue that this is not because it would be, for example, particularly difficult to come up with a definition or because unlike most other fields, DH would not benefit from delimiting its domain, but rather because the majority of researchers that self-identify as “DH scholars” are actively opposing a definition. This is due to the fact that they understand DH as “contemporary humanities,” i.e., humanities using contemporary tools, not a new discipline. While legitimate, this view is irreconcilable with the understanding of DH as the development and application of a new—computational—methodology in the humanities. We therefore come to the conclusion that there is ultimately no way around clearly delimiting these two opposing views; we propose to use the term “computational humanities” to refer to the latter field, and we present a concise definition.

1 Introduction

Digital humanities (DH) has a reputation of struggling to define itself. Articles trying to define DH have become something of a genre. The assessment of Kirsch (2014) still appears accurate today:

Despite all this enthusiasm, the question of what the digital humanities is has yet to be given a satisfactory answer. Indeed, no one asks it more often than the digital humanists themselves. The recent proliferation of books on the subject—from source-books and anthologies to critical manifestos—is a sign of a field suffering an identity crisis, trying to determine what, if anything, unites the disparate activities carried on under its banner.

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The volume *Defining Digital Humanities* (Terras, Nyhan, & Vanhoutte, 2013) collects over twenty essays on this topic and is in some ways the standard reference on the question. On the one hand, the editors clearly state in their introduction to the volume the practical need for a definition:

Why would one define an academic field? From one perspective such definitions have an obvious practical and utilitarian purpose: we must be able to define and describe what it is that we are doing not only to colleagues and students but to university management, funding agencies and the general public. (Terras et al., 2013, p. 1)

Concerning degree programs, they refer to Sinclair & Gouglas (2002) reporting on the establishment of a *humanities computing* (this is before the term *digital humanities* was coined) curriculum at the University of Alberta, who note that this goal lent “a certain urgency to defining the relevant activities” and forced them to define “the research and its boundaries” (Sinclair & Gouglas, 2002, p. 168). They highlight that unlike courses that merely incorporate some humanities computing into their syllabus, “the creation of an entire programme implies an effort to represent the field integrally” (Sinclair & Gouglas, 2002, p. 168). In sharp contrast to most attempts at definitions, which are trying to come up with either a *descriptive definition* that captures all of “the disparate activities carried on under its banner” (Kirsch, 2014), or with an *ontological definition* that captures the “true essence” of DH, Sinclair & Gouglas (2002) realized that a *stipulative definition* is needed:

Rather than unsatisfactorily attempt to answer the thorny question “what is Humanities Computing?” in absolute terms, we opted for a more relative and manageable version: “what do we want Humanities Computing to be for the MA programme at the UofA?” (Sinclair & Gouglas, 2002, p. 168)

Nevertheless, most discussions—and the editors themselves—generally seem to come to the conclusion that DH is somehow “undefinable” or “shouldn’t even have a definition” or that “a definition isn’t useful” (Nyhan & Flinn, 2016, p. 6). Even though many in the field do not seem to mind or even celebrate the alleged undefinability as a feature of an all-inclusive “big tent,” “[d]efining digital humanities is an activity that shows no signs of slowing down” (Callaway, Turner, Stone, & Halstrom, 2020, p. 11).

If one acknowledges the practical need for a clear definition of DH, which has, more recently also been stressed by Sahle (2015) and myself (Piotrowski, 2018a), the response that it is “undefinable” strikes us as rather curious—nevertheless, this contradiction seems to be generally shrugged off, “well, that’s just the way it is.” But if DH really is “undefinable,” then why? Why have all these discussions led to nothing so far? Will DH forever remain “undefinable”? Why do scholars who otherwise pride themselves of being open minded, thinking critically, and questioning established notions, proudly proclaim: “we will never know what digital humanities ‘is’ because we don’t want to know nor is it useful for us to know” (Kirschenbaum, 2014, p. 59)? In order to answer this question, we need to have another look at the landscape of DH.

2 The Landscape of DH

If we try to roughly categorize the research being published under the heading of *digital humanities*, we find that the main difference could be said to lie in the interpretation of the word “digital,” which is variously understood as referring to

1. the use of digital tools and data;
2. the use of a digital methodology or of digital methods;
3. the research on digital cultural phenomena and artifacts;
4. some kind of “magic,” which will either “save” the humanities from or subject them to the tyranny of neoliberalism (e.g., Kirsch, 2014; Keeney, 2016; Pièces et Main d’Œuvre (PMO), 2016).

We will disregard the last category for the rest of the discussion, as it has no place in serious scholarship, but let us briefly note that the difference to the other three is that “digital” here has no concrete meaning whatsoever. It is merely a symbol for desirable or undesirable developments. In the other three cases, the meaning of “digital” differs, but always has some relation to computer technology or, in the third case, to phenomena resulting from the use of computers. Nevertheless, since the technical meaning of “digital” refers to a specific form of representation, from a technical perspective “computational” would be a more accurate term in some of these cases, in particular in reference to tools, methods, and methodology.

These categories are obviously idealized from observations, and there are often no sharp boundaries, but we nevertheless believe them to be fairly representative. In fact, Roth (2019) draws a very similar picture:

The term “digital humanities” may be understood in three different ways: as “digitized humanities”, by dealing essentially with the constitution, management, and processing of digitized archives; as “numerical humanities”, by putting the emphasis on mathematical abstraction and the development of numerical and formal models; and as “humanities of the digital”, by focusing on the study of computer-mediated interactions and online communities. (Roth, 2019, p. 1)

Roth complements his observations by a quantitative analysis of the two journals *Digital Humanities Quarterly* and *Digital Scholarship in the Humanities* and the DH 2015 conference for the distribution of these three understandings.¹ He finds that there is in practice an “overarching dichotomy between digitized and numerical humanities” (Roth, 2019, p. 1), whereas the “humanities of the digital” (which corresponds to what we have called “études des cultures numériques” in Piotrowski & Xanthos (in press)), which are often closer to the social sciences when it comes to, say, the analysis of social networks, only occur marginally. In all three studied venues, however, the “digitized humanities” dominate clearly—Roth assigns between 73.9% and 86.6% of the contributions to this category. He also finds that the majority of the “numerical humanities” contributions “essentially had to do with stylometry” (Roth, 2019, p. 12).

Both on the basis of the findings of Roth (2019), as well as on my own impressions, it is clear that the dominant interpretation of DH in the “big tent” is centered around the use of digital tools and data, or what Roth calls the “digitized humanities.”

¹He also compares the distribution with that found in computational social science (CSS), represented by the ICSS 2015 conference.

3 Unpacking DH

How can the above overview of the landscape help to explain the seemingly never-ending discussions about definitions of DH, and why some people insist on a definition, whereas others outright reject any definition? The key lies in the observation that there are two main, very distinct interpretations of the term *digital humanities*, of which one is dominant. The dominant interpretation is the one that Roth (2019) calls “digitized humanities,” but which one could also call “contemporary humanities,” as it relates overwhelmingly to the use of contemporary technology—digital tools and resources—but only to a limited extent to genuinely new methods or even a new methodology. The use of the term “digital” can be justified as contemporary technology is overwhelmingly digital. While even the mere use of digital technology is likely to have a much more profound impact on the humanities than previous technology, such as gramophone, film, typewriter, or photocopier, on a more abstract level, we have a similar situation: an evolution of the humanities disciplines prompted and enabled by new technology. This is why I have suggested in a blog post² that “digital” here really means “belonging to the digital age,” i.e., modern or contemporary.

In contrast, the second (minority) interpretation, which Roth (2019) calls “numerical humanities,” relates not to the use of new tools, but of new *methods* and thus ultimately a new methodology. While it is true that, as Orlandi (1990, p. 114) has put it, “un po’ di aritmetica ha sempre fatto parte delle discipline umanistiche,” the systematic and generalized use of “mathematical abstraction and the development of numerical and formal models” (Roth, 2019, p. 1) represents a major departure from traditional research in the humanities.

And this is exactly where the root of the problem lies: the majority of actors in “the field” (to use a maximally neutral term) belong to the “contemporary” or “digitized” humanities, which can be seen as a natural and organic development *within* the existing disciplines. The actors in the “numerical” or—as I am going to argue: “computational”—humanities, however, are not only a minority, but they are typically the ones with an explicit DH denomination or affiliation.

Only in this context the obstinate refusal to define DH makes sense: “contemporary humanities” scholars already *have* a disciplinary home (in literature, history, etc.), which they do not intend to leave. This explains why defining DH as anything approaching a discipline is treated as a threat: a narrower definition of *digital humanities* might imply that they would eventually have to give up the DH label that has helped them to position themselves as some kind of vanguard in their disciplines. It is also in this context—and only in this context—that Kirschenbaum’s famous dictum of DH as “a term of tactical convenience” (Kirschenbaum, 2014) makes sense. He clearly states that scholars “now wield the label ‘digital humanities’ instrumentally” (Kirschenbaum, 2012b, p. 415) “to get things done—‘things’ that might include getting a faculty line or funding a staff position, establishing a curriculum, revamping a lab, or launching a center” (Kirschenbaum, 2012a).

These two fundamentally different outlooks on DH are also reflected in predictions of its future: it is only logical that “contemporary humanities” scholars typically argue that the digital humanities will become “just” the humanities: “Flash forward 10 years, and digital humanities will be present in just about every humanities department. Everyone will be a digital humanist, more or less. And as with theory, the digital humanities job openings will go away” (Cassuto, 2017). Also on

²The Digital Age (English remix) – NLP for Historical Texts (2018-03-27, German orig. 2018-08-25
<https://nlphist.hypotheses.org/343>)

Twitter—as Warwick (2016, p. 540) has accurately observed, “DH methodology storms often seem to be associated with Twitter, whether this is the origin of the argument or the vector for discussing it”—this is a frequent topic of speculation (see fig. 1)—and it is arguably a very likely development.

While Andreas W. Müller sees the future of DH rather “somewhere between IT-service and a discipline,” this scenario (“DH replaces the humanities”) is one of the scenarios he discusses in his blog post “Digital Humanities in 2040: Four Scenarios,”³ along with “DH turns into its own discipline,” “DH turns into IT assistance for humanists,” and “Digital Humanities fades away.”

Another recent development—which also started on Twitter—may serve as another example. As we have argued above, the lack of commonly accepted definitions (and the opposition against them) affects only a minority in “the field,” viz., researchers in “numerical humanities.” It is thus not surprising that all calls for more definitional rigor have gone more or less unheard. The institutional problems faced by these researchers have not disappeared, though. Unlike the opposition “contemporary humanists” have to face, which is essentially *within* their discipline—and thus not unlike traditional controversies between different schools, reformers vs. traditionalists, etc.)—the “numerical humanities” must ultimately aspire to establish a new discipline and thus faces opposition from faculties, universities, and funders. While some of the “numerical humanities” (notably what we call *applied computational humanities* below, see sec. 5.2) are also located inside the respective established humanities disciplines, they represent a methodological innovation (not to say a disruption); this much more fundamental conflict has become at least partly apparent in the debates triggered by Da (2019): Colavizza (2019) has very convincingly analyzed this as “breaking the social contract” of humanities research; this antagonism goes much deeper than the mere opposition between quantitative and qualitative approaches, even though it may at first seem to be just this.

The “overwhelming enthusiasm and the clear demand for a computational humanities research venue”⁴ in response to a tweet by Folgert Karsdorp on July 16, 2019, pondering “a workshop/event/journal/community for computational research in the humanities that doesn’t exclude people with profound computational skills and knowledge”⁵ on the one hand and the negative or even hateful reactions⁶ indicates a growing rift between—I think—“numerical humanities” (aiming to build computational models) and “contemporary humanities” (primarily interested in using digital tools and possibly “updating” the humanities).⁷

4 The Rise of Computational Humanities

The term *computational humanities* used by Karsdorp and others in the ensuing discussions in contrast to *digital humanities* is not new (see sec. 5). However, I am not aware that it would have generated the same enthusiasm, or the same polemics, on any earlier occurrence. One crucial factor seems to have been the timing. Karsdorp’s tweet came right after the DH 2019

³<https://methodos.hypotheses.org/1610>

⁴<https://twitter.com/FolgertK/status/1151572736730439684>

⁵<https://twitter.com/FolgertK/status/1151167545539477504>

⁶For example, this and following replies: <https://twitter.com/miriamkp/status/1152389216363401216>

⁷Frederik Elwert published an excellent summary of the events leading to the above announcement on his blog: #beyondDH: The sudden but consequential rise of the Computational Humanities, which created at least the same amount of buzz on Twitter.

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Peter Krantz @peterkz_swe · Jan 6, 2018
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When **will "digital humanities" become just "humanities"**? Will there be a point where we need "analog **humanities**" because the default **will** be digital? [#dh](#)

💬
↻ 6
♥ 12
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Lyn Tribble @lyn_tribble · Nov 18, 2015
 ▼

Closing Q: When **will** digital come out of **digital humanities**? When **will** it **just become** normal practice? [#ANZAMEMS](#)

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↻ 2
♥ 1
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Casey Brienza ✓ @CaseyBrienza · Jul 20, 2013
 ▼

Will book history **just become digital humanities**? God I hope not!! [#SHARP13](#)

💬
↻ 3
♥ 3
📤

Kai-Christian Bruhn @kaischi · Dec 5, 2013
 ▼

MT [@adreinhard](#): Query: when **will "Digital Humanities" just become "Humanities"**, or is there a reason to keep this beyond 2013? [#dighum1213](#)

💬
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Rebecca Frost Davis @FrostDavis · Jan 8, 2012
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[@jenterysayers](#) says drop the "digital"; I've been wondering when **digital humanities will just become humanities** [#mla12](#) [#s665](#)

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Mo Pelzel @MorrisPelzel · May 7, 2019
 ▼

Replying to [@judell](#) and [@edtechfactotum](#)
 Yeah, me too ... so when **will "digital humanities," "digital history," etc. just become "humanities" and "history?"**

How long after Gutenberg did it take for "print" books to **just** be referred to as "books?"

💬
↻
♥ 1
📤

Andrew Reinhard @adreinhard · Dec 5, 2013
 ▼

Query: when **will "Digital Humanities" just become "Humanities"**, or is there a specific reason to keep this qualifier beyond 2013? [#sortingdh](#)

💬 2
↻ 1
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Figure 1: Twitter search results (as of February 28, 2020.) for the query "digital humanities will become just humanities"

conference, which had just taken place July 9–12, 2019, in Utrecht. The discussions also at least hinted at a certain dissatisfaction with mainstream DH, having “the impression that most work that is more technically/statistically/computationally involved can’t find its place (in DH journals or conferences),”⁸ while *Digital Scholarship in the Humanities*, the flagship journal of DH accepts and publishes articles rambling about the “Paraversity of Digital Agency” (Papadopoulos & Reilly, 2020).

More than anything else, the outrage or derision with which some people reacted to the feeling of “unease under the computational savvy that there is a trend yet again to push computational heavy content and computation inclined people to the peripheries of the field”⁹ highlights the fundamental disconnect between the different, well, disciplines lumped together under the heading of “digital humanities” and the illusion of the “big tent.” For example, one person ridiculed the concerns as unjustified whining: “Just bc some text analysis papers didn’t get accepted ppl are feeling like they were excluded?! Surely I am not the only one who has had good proposals rejected.”¹⁰ Joris van Zundert noted that the impression of exclusion “seems to have been amplified by the acceptance/rejection ratio for computation heavy papers” at DH 2019: “This is the sentiment I heard from several people in any case.”¹¹ Some consequently suggested to analyze the acceptance ratios by category to quantitatively verify this claim, which misses the point on several accounts.¹²

We can see here, I believe, the same fault lines again, illustrating the fundamentally different conceptions and motivations of “contemporary humanities” scholars, at home in their disciplines, and “computational humanities” scholars, who are denied the status of a discipline, often by both their institutions and their “contemporary humanities” colleagues in the “big tent.”

This explains why so far all attempts to define DH more precisely have failed. More importantly, it also becomes clear that any future attempts at a common, overarching, but precise definition are also bound to fail: while the minority would hugely benefit from obtaining the status of a discipline—for which a wide consensus on its outlines is required—the majority benefits from the status quo and thus has no motivation at all to change it.

What can we do? Franco Moretti has said in an interview, “‘Digital humanities’ is simply a formula that has come to identify a large field. I use it only because everybody uses it and everybody will use it. But, frankly, I don’t like it. I think it means nothing, whereas ‘quantitative’ and ‘computational’ mean something” (Hackler & Kirsten, 2016, p. 5). Because the term DH has become so entrenched (and features in my job title), I used to be convinced that “it may prove easier to cleanse the phrase than to dispense with it” (as Simon (1996, p. 4) argued with respect to the similarly unfortunate term *artificial intelligence*), i.e., that is better to work towards a definition of DH rather than trying to find an alternative term.

However, given the realization outlined above, I am now starting to believe that it is, in fact, better to clearly distinguish between DH (with its current broad denotation) and the field interested

⁸<https://twitter.com/FolgertK/status/1151238347941171200>

⁹<https://twitter.com/jorisvanzundert/status/1152151034732666880>

¹⁰<https://twitter.com/profwernimont/status/1152392193245667328>

¹¹<https://twitter.com/jorisvanzundert/status/1152151090760224768>

¹²Whether people feel they or their work are being excluded is a *qualitative* question: while a quantitative analysis may provide some hints, it cannot be answered quantitatively. A further issue is that the analysis would rely on the assumption that the categorization is adequate for this purpose. It also ignores that an unknown number of people probably did not even bother to submit such papers to DH, because they do not feel it a viable venue for their work. The irony of demanding quantitative evidence when one otherwise rejects quantitative methods seems to have gone unnoticed.

in developing and using a digital methodology in the humanities—approximately the field Roth (2019) calls “numerical humanities.” The term *computational humanities* has several advantages: it is already known, and while it does not yet have a precise definition either, its denotation, as commonly understood, is much narrower than that of DH and largely coincides with the above-mentioned field. *Computational humanities* is thus perhaps the choice that has the best chance of gaining wide acceptance.

5 Defining Computational Humanities

As already mentioned above, the term *computational humanities* is not new; in fact, it is older than the term *digital humanities*. The first use I have found (in an admittedly cursory search) is by Wulf (1997) in an article on future directions of computing; he notes that while “computational humanities” (in quotation marks) may not be “the next World-Wide Web,” it is not an application most computer scientists have considered, “an important application—probably closer to what the general public will do with the emerging infrastructure than our techie applications,” and “a source of exciting challenges for computer science and engineering” (Wulf, 1997, p. 111). He gives two examples to demonstrate that “technology is transforming the scholarship of these researchers” and stresses that it is not “just that it’s more convenient,” but that it is rather “the representation of and access to information allows them to organize kinds and quantities of information that weren’t possible, hence to ask and answer questions about the human record that couldn’t be answered before” (1997, p. 111). He draws a parallel to science and engineering, where “we are used to the notion that new instruments allow us to address new questions; now the same is happening in the humanities. And just as in the sciences, the enhanced ability to answer questions provokes us to ask questions we hadn’t considered before” (1997, p. 111).

The first time the term *computational humanities* was intentionally used in contrast to *digital humanities*—along with a reflection on its definition and its relationship to the humanities, computer science, and DH—was probably at the 2014 Dagstuhl seminar “Computational Humanities – Bridging the Gap Between Computer Science and Digital Humanities.” The introduction to the seminar report (Biemann, Crane, Fellbaum, & Mehler, 2014) outlines the organizers’ understanding of computational humanities (CH) as follows:

At the core of the organizers’ understanding of CH is the idea that CH is a discipline that should provide an algorithmic foundation as a bridge between computer science and the humanities. As a new discipline, CH is explicitly concerned with research questions from the humanities that can more successfully be solved by means of computing. CH is also concerned with pertinent research questions from computing science focusing on multimedia content, uncertainties of digitisation, language use across long time spans and visual presentation of content and form. (Biemann et al., 2014, p. 81)

The organizers thus regard CH as a “new discipline,” an “an independent field of research,” and notably one *distinct from DH*. In his talk (for the abstract, see Biemann et al., 2014, p. 87), Gerhard Heyer from the University of Leipzig detailed this conception by describing CH and DH as being part of computer science and the humanities, respectively, and *jointly* constituting an interface between computer science and the humanities. Arguing that the “degree of mutual understanding of research issues, technical feasibility and scientific relevance of research results

will be much higher in the area of overlap between the Computational and Digital Humanities than with any intersection between Computer Science and the Humanities,” he proposed to “set up research groups in both scientific communities, Computer Science and Humanities.”¹³

Heyer describes DH as “the creation, dissemination, and use of digital repositories” and CH as “the computer based analysis of digital repositories using advanced computational and algorithmic methods,” which “implies a dominance of computational aspects.” This distinction is compatible with the observations discussed in sec. 2. Heyer further argues that the difference between the two orientations is reflected “in the know-how of researchers and their organizational attachment to either Humanities or Computer Science departments,” and that consequently their research is either “more focused on just the creation and use of digital repositories, or on real program development in the Humanities as an area of applied Computer Science” (Biemann et al., 2014, pp. 87–88). As an observation this is likely to be generally true, but it is too vague to serve as a definition, in particular, if we also consider the question whether CH—in contrast to DH—may in fact be considered a discipline.

5.1 What is a Discipline?

In order to answer this question, we first need to define what we mean by *discipline*. Although it is not easy to define the concept of an academic discipline, Becher & Trowler (2001, p. 41) note that people “with any interest and involvement in academic affairs seem to have little difficulty in understanding what a discipline is, or in taking a confident part in discussions about borderline or dubious cases.” Krishnan (2009) identifies six fundamental characteristics of academic disciplines:

1. a specific object of research (which may be shared with other disciplines);
2. a body of accumulated specialist knowledge referring to their object of research, which is specific to them and not generally shared with another discipline;
3. theories and concepts that serve to organize the body of accumulated expertise;
4. terminology or technical language adjusted to their research object;
5. specific research methods;
6. lastly, and probably most crucially, an institutional manifestation in the form of subjects taught at universities.

Krishnan (2009) stresses that only through institutionalization can disciplines endure from one generation to the next. A discipline is therefore typically founded by the creation of a professorial chair dedicated to it in an established university. He also notes that not all disciplines exhibit all six characteristics, but that in general, a field of academic research is more likely to be recognized as an autonomous discipline capable of developing its own body of knowledge the closer it is to this ideal model (Krishnan, 2009, p. 10).

From this list of characteristics, we can see that certain orientations of the digital humanities—especially those that descend more or less directly from humanities computing—satisfy many, if not most of these requirements. Even if we consider that only a part of the publications labeled “digital humanities” concern these orientations, there is undeniably a body of knowledge accumulated in specialized journals such as *Digital Scholarship in the Humanities* (DSH), *Digital*

¹³This is exactly what has happened at the University of Leipzig: Digital Humanities and Computational Humanities are two research groups, the former leaning more to the humanities side and the latter more to the computer science side.

Humanities Quarterly, or *Digital Studies/Le champ numérique*. Monographs such as McCarty (2014), anthologies such as *Debates in the Digital Humanities*, or textbooks such as Van Hooland, Gillet, Hengchen, & De Wilde (2016) or Jannidis, Kohle, & Rehbein (2017), document the research methods specific to the field. There are associations (ADHO, EADH, Humanistica, DHd, etc.) and national and international congresses. And finally there are no longer just “centers”—service rather than research units—but also departments, institutes, professors, degree programs, and students.

What is still lacking, however, is a common and clearly identifiable object of research. Instead of a description of the research object we usually find references to “practices” or “methods.” Does this mean that CH might be a discipline that is not defined by a research object but rather by methods? I do not think so. On the contrary, I would argue that—apart from institutional factors—a discipline is characterized above all by a particular combination of the following two aspects:

1. an object of research and
2. a research objective.

Research methods are a third aspect, but one that plays only a secondary role: they depend on the research object and the research objective, and on scientific and technological progress, which requires their adaptation and allows them to evolve, while the research object and the research objective remain stable. In addition, academic disciplines always use a variety of methods: for example, although the use of qualitative methods can probably be considered “typical” of research in humanities disciplines, quantitative methods also play a significant role, and the reverse holds for the “hard” sciences as well.

5.2 A Concrete Definition

I have already proposed a definition—or explication—of the subfields of DH that I believe to be actually novel (Piotrowski, 2018b; Piotrowski & Xanthos, in press), but still using the term *digital humanities* rather than *computational humanities*; it is essentially a matter of replacing “digital” with “computational” now. It is nevertheless useful to summarize the definition in the specific context of this paper.

The definition is based on the following considerations. First of all, as discussed in sec. 5.1, a coherent field of research (which may or may not actually be called a discipline) is characterized by a particular combination of (1) a research object and (2) a research objective; it is *not* dependent on a particular method. Second, how does research—in whatever field—come to new insights? As we do not want to dive into deep philosophical questions, the answer is easier than it may seem: it does so by *building models* of its research object. All research builds models, since the study of an object is nothing other than the creation of its model. Stachowiak (1973) affirms: “Hiernach ist alle Erkenntnis Erkenntnis in Modellen oder durch Modelle, und jegliche menschliche Weltbegegnung überhaupt bedarf des Mediums <Modell>.” (Stachowiak, 1973, p. 56, emphasis in original); Bachelard (1979, p. 3) characterizes the model as “un intermédiaire à qui nous délégons la fonction de connaissance, plus précisément de réduction de l’encore-énigmatique, en présence d’un champ d’études dont l’accès, pour des raisons diverses, nous est difficile.” In short, we model to understand (Le Moigne, 2003).

The importance of the computer lies precisely in the fact that it is a “universal modeling machine”; “computers came into existence for the sake of modeling” (Mahoney, 2000). More specifically, the massive impact of computers on research is due to that fact that they, as Weizenbaum (1976/1984, p. 144) puts it, “make possible an entirely new relationship between theories and models”:

I have already said that theories are texts. Texts are written in a language. Computer languages are languages too, and theories may be written in them. Indeed, for the present purpose we need not restrict our attention to machine languages or even to the kinds of “higher-level” languages we have discussed. We may include all languages, specifically also natural languages, that computers may be able to interpret. The point is precisely that computers do *interpret* texts given to them, in other words, that texts determine computers’ behavior. Theories written in the form of computer programs are ordinary theories as seen from one point of view. [...] But a computer program has the advantage not only that it may be understood by anyone suitably trained in its language, just as a mathematical formulation can be readily understood by a physicist, but that it may also be run on a computer. Were it [a program implementing a theory of the pendulum] to be run with suitable assignments of values to its terms, the computer would *simulate* an actual pendulum. And inferences could be drawn from that simulation, and could be directly translated into inferences applicable to real pendulums. A theory written in the form of a computer program is thus both a theory and, when placed on a computer and run, a model to which the theory applies. (Weizenbaum, 1976/1984, pp. 144–145, emphasis in original)

Thus, the difference between computational humanities and most traditional research in the humanities is not that computational humanities constructs models, but that computational humanities construct models that can be manipulated by the computer, i.e., *computational models* or, more generally, *formal models*. This general notion is in line with important earlier work in humanities computing (notably, Borillo, 1985; McCarty, 2014; Orlandi, 1990; Thaller, 2017) as well as the reflections by Meunier (2017).

However, we need to further distinguish between two subfields of CH, because they clearly differ in their research objectives; we call these subfields *applied computational humanities* and *theoretical computational humanities*.¹⁴

The term *applied computational humanities* refers to those fields of research which, like digital history or digital literary studies, for example, fall within a humanities discipline and have as their object the construction of formal models of the phenomena studied by this “parent discipline,” as well as the methodology of this construction. The difference between the “traditional” and “digital” therefore relates specifically to the nature of the models they aim to construct: in the case of the latter, they are *formal models* that can be manipulated by computers. In all other respects, they share the research objects and objectives of the humanities disciplines to which they belong. In particular, computational research must meet all the quality and relevance criteria of these disciplines—it goes without saying that no relaxation of these criteria can be justified by the use of particular methods and tools.

¹⁴In what follows, we are freely inspired by the definition proposed by Gladkij & Mel’čuk (1969) for *mathematical linguistics*.

The *theoretical computational humanities*, on the other hand, study the general properties of such models at a higher level of abstraction. In other words, the theoretical computational humanities create and study the *metamodels* whose concrete application in the humanities is the domain of the applied computational humanities, as well as the methodology for constructing these metamodels. One might say that the theoretical computational humanities deal with the general theory of materials and construction, while the applied computational humanities directly raise the building. Because of their metascientific nature, the theoretical computational humanities are neither “quantitative” nor “qualitative.” They aim to develop abstract models, meta-models, which may or may not have a quantitative dimension, but the research question underlying them is the *adequacy* of these models, not their application. The theoretical computational humanities therefore serve as metascience for the applied computational humanities. As such, they could in principle be considered as a sub-discipline of computer science (as suggested by Heyer, see sec. 5), studying its application to a specific field, in this case the humanities.

We believe, however, that this proposal presents the considerable risk of a disconnect between research in theoretical computational humanities and the issues at stake concerning the research objects and objectives of the humanities. The theoretical computational humanities face the same obstacles as other sub-disciplines of applied computer science, in that they have to meet the evaluation criteria of both computer science research and their field of application. Experience shows that although the research questions of the theoretical computational humanities are distinct from those of the humanities, a thorough knowledge of the humanities is essential for the advancement of research in this field. This is why we propose *in fine* to consider theoretical computational humanities as a discipline in its own right. As we have now defined their research object and objective, and thus meet all the requirements for a discipline (see sec. 5.1), it is a legitimately defensible status—regardless of the institutional configuration in which it is realized.

It is important to stress, however, that there are no strict boundaries between theoretical and applied computational humanities, and the latter are obviously in constant exchange with the digital humanities in the wider sense of “contemporary humanities.”

6 Conclusion

The question we have asked at the outset was: why are so many “digital humanists” obsessed with *not* defining what DH is? The answer is simple: because the majority of them are really “contemporary humanists” and are not interested in creating a new discipline—which would also be competing for funds. They are happy in their disciplines and want to maintain their “vanguard” status *in* their disciplines, and this is what the “big tent” really is about. Callaway et al. are brutally honest (in a naïve way) when they admit: “We considered producing the demographic graphs in this article in R as a signal of disciplinary belonging but ultimately decided that the fact that the most interesting figures were made not with a statistical programming language, but with built-in spreadsheet capabilities was an important aspect of what we wanted to say in this paper.” (2020, p. 11)

This exposes the famous notion of DH as a “big tent” as what it is: a political fiction.¹⁵ Such fictions can be useful, and they can be durable even after having been recognized as fictions (as

¹⁵It even has its own founding myth, according to which Father Busa single-handedly founded DH; this is likely to be about as true as the notion that Switzerland was founded in 1291.

in the case of Switzerland). However, they alone are rarely sufficient: when too many fault lines coincide they become untenable (as in the case of Belgium). Like the name “digital humanities,” the fiction of the “big tent” has certainly been useful in order to raise the visibility and strength of *all* orientations under its canopy. I do not have issues with that, and would like to stress at this point that I do not doubt that there exist shared interests, which can make general events like the DH conferences useful. It has certainly contributed to the creation of positions, programs, and (some) institutional structures.

However, now that these structures exist, we are at a point at which we need to think about their sustainability. Now that there are professors of (and not merely *in*) DH, degree programs, etc., it is ridiculous to cling to a “rebel” status, arguing that DH cannot and must not be defined. It is now necessary to think about the further development; for example, how to handle growing numbers of students? When recruiting a second professor, what orientation to look for? Should a program in DH be designed in a way that would allow holders of a master’s degree in DH to teach in public schools? And if so, what subject(s)? And so on.

In the societal context of the “digital transformation,” there is probably no immediate danger at the moment that the DH structures created (whatever the orientation) are about to be abolished as such (i.e., professors cannot simply be fired, programs with a sufficient number of students cannot simply be closed), but one should not be too complacent either, in particular given the fact that in many places DH is largely represented through non-traditional institutions, such as centers, and that there is often very few permanent or tenured staff; teaching may be largely provided by staff primarily affiliated with other units, etc. These measures have allowed universities to quickly respond to growing demand, but at the same time, it also makes it easy to disband these structures, e.g., in case of economic pressure. It is generally more difficult to close a department than a center that has few, if any, permanent positions on its own. The current structures are thus generally much less stable than they may appear, in particular in the absence of the status of a recognized discipline and thus a clear “academic value proposition.”

It should be obvious at this point that it’s hopeless trying to reconcile these two objectives—they are not just “views,” but they represent totally different goals. I am therefore convinced that it does not make sense trying to maintain the fiction of the “big tent.” In particular, we need a specific designation for “DH as a discipline,” and I believe that “computational humanities” is the term that is most likely to be adopted for this field.

The term *digital humanities*, without further qualification, has its *raison d’être* as a designation encompassing “contemporary humanities,” computational humanities, and digital cultural studies (or “humanities of the digital”). In this broad sense, in the absence of a common research subject, the term does not describe a discipline and therefore does not require an explicit definition, offering the openness and inclusiveness demanded by advocates of the “big tent” idea.

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