Digital Humanities and the Climate Crisis

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Introduction

The Sussex Humanities Lab (SHL) is a research community that investigates technology's role in shaping culture, society and the environment, and the use of technological tools to undertake research within the arts, humanities and social sciences.

In 2019 SHL established a Carbon Use and Environmental Impact Working Group. In 2020 this group published the Sussex Humanities Lab Environmental Strategy,[1] a document that seeks to ground our research and practice in environmental sustainability and resilience. The Strategy has two purposes: first, to be an evolving point of reference for all SHL members, in formulating bids, planning activities, and running working groups; and second as a call to action that we hoped would inspire our field, our partners, and our collaborators.

We welcomed the positive responses to the Strategy, but knew that a call to action alone was not enough. This report is the next stage of our action. It is the result of mixed-methods research that sought to explore the environmental activities and strategies of Digital Humanities (DH) research groups comparable to SHL. The research took place between January and March 2021, and was funded by SHL. What follows describes our research methods, what we learnt, and the next steps we intend to take.

Key findings

1. DH research groups are responding to the climate crisis.
2. When DH research groups are asked to think strategically, the climate crisis is given prominence within those strategic plans.
3. There is a direction of travel towards greater prioritisation of the climate crisis in DH research.
4. Varying appetites for strategic and challenge-led research exist among the DH research groups.
5. More work is needed to understand environmental action in the DH community and comparable work in allied fields.

1 Sussex Humanities Lab Carbon Use and Environmental Impact Working Group, Jo Walton, Alice Eldridge, James Baker, James, David Banks, and Tim Hitchcock, The Sussex Humanities Lab Environmental Strategy, Version 1.3 (2020) http://doi.org/10.5281/zenodo.3776161

Research Methods

This study sought to understand how and in what ways humanities departments, when they conduct their DH research, consider the climate crisis. So as to avoid self-selection bias, rather than put out an open call for input or circulate information around our networks, we focused instead on the work of DH research groups at fifty of the most prominent global universities for research.

To create this sample we used the WURR (World University Research Ranking)[2] dataset. Starting with the institution ranked first by 'Global Rank', we applied two filters to the dataset.

First, we cross referenced institutions listed in the WURR register against a web search for 'digital humanities' (see 'Definition of Digital Humanities' below). This filter was required as a number of the top ranked universities in the WURR dataset are STEM focused and do not have a recognisable humanities research capacity.

Any institution with recognisable capacity in DH was then added to our own dataset. However, as there is a propensity for highly ranked research universities to be located in a small number of countries, we chose to ration the number of candidate universities to a country's top three universities. The exception to this was the USA, where we permitted four universities, the rationale for which being the historic size and importance of the US university sector and that after filtering for DH capacity, the four highest ranked universities were geographically spread across the country (Massachusetts, Pennsylvania, Georgia, and California).

These two filters were applied until we had identified fifty humanities departments.

After building our sample, we then applied a mixed methods approach to the data:

- First, we created a four question survey that was emailed to each identified humanities department.
- Second, we conducted desk research that examined climate crisis related activities or strategies on the live public facing websites of the research groups that did not or were unable to respond to our survey.

WURR Methodology

The WURR uses three key variables to determine their 'Global Rank' register: research multi-disciplinarity, research impact, and research collaborative-ness. To quantitatively measure these three variables, seven weighted indicators are selected using Web of Science as the source of data. These indicators are:

1. Percentage of multi field documents – the degree of multi-disciplinary research across different fields – weighting 1/7th.

2 https://worldresearchranking.com (accessed 11 January 2021)

2. Percentage of multi-category documents – the degree of multi-disciplinary research across different categories within the same research field – weighted 1/7th.
3. Category Normalised Citation Impact – the average standard of University's research impact – weighting 1/7th.
4. Percentage of documents in Q1 journals (Top quartile of journals based on Journal Impact Factor) – the proportion of University's publications are in most impactful journals – weighting 1/7th.
5. Percentage of documents in top 1% most cited documents by field, year and document type – the proportion of peaks of excellence in University's research impact – weighting 1/7th.
6. Percentage of industry collaboration – the degree of collaborative-ness across academia-industry boundaries – weighting 1/7th.
7. Percentage of international collaboration – the degree of collaboration across international borders – weighting 1/7th.

For each university, its values for these seven indicators are normalised and aggregated for respective rankings.[3]

Definition of Digital Humanities

The definition of 'Digital Humanities' has attracted substantial literature.[4] It is not our purpose to contribute to that literature. However, in order to identify candidate universities with capacity in the field of digital humanities we used three overlapping definitions of the field:

1. That Digital Humanities is an area of scholarly activity at the intersection of computing and the disciplines of the humanities, including the critical analysis of the intersections between computing and the academe, society, and culture.
2. That Digital Humanities involves the intensive use of computer software and hardware to retrieve, analyse, and present humanities data at the service of humanities research questions and problems.
3. That Digital Humanities captures and describes the innovative process (both disruptive and incremental) that surrounds the evolution of all aspects of humanities research, through the application of electronic technologies and processes.

3 For full details, see https://worldresearchranking.com/methodology/ (accessed 29 March 2021).
4 For example Matthew K Gold and Lauren F Klein, eds, *Debates in the Digital Humanities 2019* (University of Minnesota Press, 2019); Roopika Risam, *New Digital Worlds: Postcolonial Digital Humanities in Theory, Praxis, and Pedagogy* (Northwestern University Press, 2019); Ryan Cordell, 'How Not To Teach Digital Humanities', in *Debates in Digital Humanities 2016* (University of Minnesota Press, 2016); Willard McCarty, 'Getting There from Here. Remembering the Future of Digital Humanities Roberto Busa Award Lecture 2013', *Literary and Linguistic Computing* (2014); Matthew G. Kirschenbaum, 'What Is "Digital Humanities," and Why Are They Saying Such Terrible Things about It?', *Differences* 2014); Bethany Nowviskie, 'On the Origin of "Hack" and "Yack"', Bethany Nowviskie (blog), 8 January 2014, http://nowviskie.org/2014/on-the-origin-of-hack-and-yack/; Melissa Terras, Julianne Nyhan, and Edward Vanhoutte, *Defining Digital Humanities: A Reader* (Ashgate, 2013).

Survey Design

This study is interested in understanding how DH research groups (including laboratories, centres, departments, and clusters) have, are, and hope to respond to the climate crisis. This is a research challenge, often expressed by governments, funders, and agencies through their prioritisation of research into areas such as ‘sustainable cities’, ‘supporting climate action’, ‘developing clean energy’, or ‘enabling responsible consumption’. These climate crisis specific priorities often form a part of lists of priorities issued by governments, funders, and agencies that cover a range of challenges facing modern societies. Rather than design our own lists of ‘challenges’ and associated questions, we used the communicated research priorities of three reputable and relevant organisations as a scaffold for our own survey’s questions. These organisations are known to us and so their selection is based on our perspective on research and research challenges. Each was chosen as they represent a different analytical strata:

- The UKRI (UK Research and Innovation) Digital Economy Theme Research Priority Areas provide a national perspective which focuses on specific digital related issues.
- The European Commission Horizon Europe Pillar 2 (Global Challenges & European Industrial Competitiveness) provides a regional perspective with a broader focus.
- The UN’s Sustainable Development Goals provide international priorities through recognised Global Challenges.

Whilst our study was interested in responses to the climate-specific aspects of these research priority lists, we chose to ask DH research groups to respond to the whole lists. Our rationale for this was twofold. First, asking for responses to all research priorities would provide context to responses to the climate emergency related research priorities. Second, using the whole lists obscured our interest in climate crisis related research priorities, with the intention of mitigating the impact of our interests on respondents’ behaviour.

Finally, whilst wary of entering into the debate on ‘what is the digital humanities?’, we recognise that conceptual priorities vary between countries and regions where humanities research is originated and conducted. We therefore asked respondents to indicate how they identify with the digital humanities as a means of deepening our understanding of their responses to our three challenge led questions.

A copy of the survey is include as Appendix 1.

The research was approved by the University of Sussex Social Sciences & Arts Cross-Schools Research Ethics Committee (C-REC). The ethical review application number of the study is ER/JB677/2.

Results

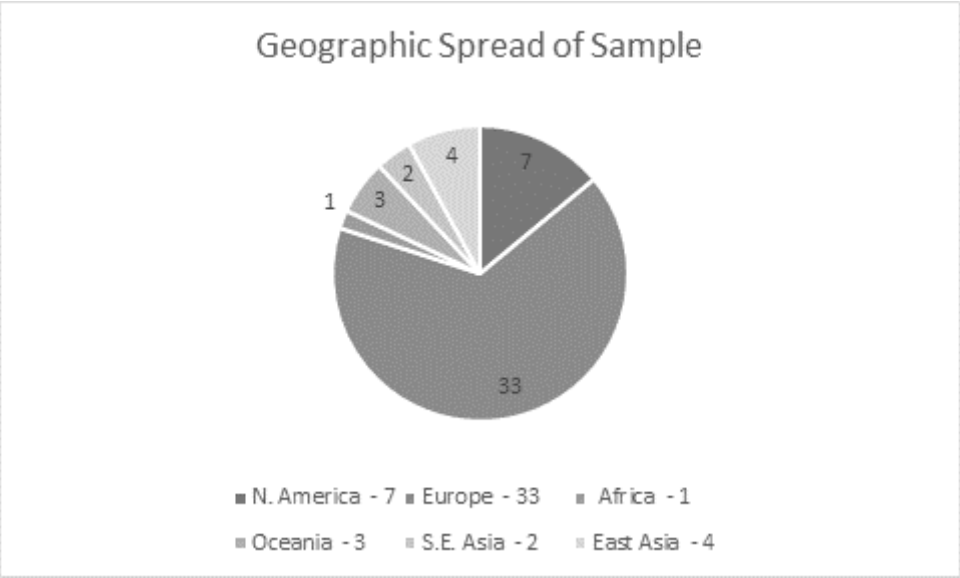
We have divided the results into three parts: the review of the WURR data-set; the survey; and the desk based research.

WURR review

The WURR produces a number of ordinal datasets, from which we chose to interrogate their 'Global Rank' data (see 'WURR Methodology' above). We systematically interrogated this list of universities, cross referencing each against identifiable DH capacity, and limiting our sample by country so as to not over-represent a small number of countries.

Our findings from this process showed that whilst DH capacity is typically found in DH departments, there was a notable frequency of institutions where DH capacity is found in a library. We also found that DH-oriented libraries became more prevalent as the geographical location of the university moved eastwards towards the international dateline, though with some notable exceptions, such as Carnegie-Mellon in the USA and in KU Leuven in Belgium. Outside libraries, we also found examples where DH capacity is limited to offering a single course or qualification (usually a Master's level degree). In these cases it was often difficult to identify a suitable person to send the survey to (see 'The Survey' below).

There were three notable amalgamations of DH capacity that became evident during our data collection, which were located in three separate European countries: Norway, Denmark and Finland. Here capacity is shared amongst a number of institutions. To make allowances for this, we modified the way we included a named institution in our dataset, so that when they were part of such an approach, only the amalgamated entity was included as the representative for all qualifying universities, rather than each member institution.



Only three North American countries are represented in WURR (USA, Canada, Mexico), but

a significant number of WURR top ranked universities are from North America, many of whom have DH capacity. The structure of our filter, therefore, created a bias against the inclusion of North American universities in our sample. Further, as many of the top ranked universities in WURR are STEM focused and lack a recognisable humanities research capacity, this created an under-representation of Asian universities in our sample.

Taken together these factors led to the creation of a sample of 50 universities with a clear European bias.

Survey

From our dataset of 50 universities, we were able to identify 47 suitable contact email addresses to which the survey was sent at the beginning of February 2021. Recipients were given 13 business days to respond, with a polite reminder sent five days before this deadline. We received 10 responses.[5] Whilst this is a small number, mindful of the Covid pandemic placing excessive time pressures on university academic staff during the time-period of our survey, we did not follow up any further.

Our survey asked four separate questions.

- The first three used a Likert scale from 'Most Important' to 'Least Important' response method, and asked respondents to differentiate between past and future research priorities.
- The fourth question asked respondents how they defined 'Digital Humanities' from three choices, with the option to write in an alternative definition.

The four questions were as follows:

1. These priorities have a digital focus. Specifically, they are the Digital Economy Theme Research Priority Areas identified by the UK Engineering and Physical Sciences Research Council (EPSRC), a part of UKRI.
    a. Trust, Identity, Privacy and Security
    b. Beyond a Data Driven Economy
    c. Sustainable Digital Society
    d. Equitable Digital Society
    e. Content Creation and Consumption
2. These priorities have a more general focus. Specifically, they are the 'Clusters' from Pillar 2 of the European Commission's Horizon Europe program.
    a. Health, Demographic change, and Wellbeing
    b. Culture, Creativity, and an Inclusive society
    c. Civil security for society
    d. Digital, Industry and Space
    e. Climate, Energy and Mobility
    f. Food, Bioeconomy, Natural Resources, Agriculture and Environment
3. These priorities have a development focus, reflecting recognised global challenges. Specifically, they represent the UN's Sustainable Development Goals.

5 Note that not all respondents responded to every question.

a. Removing global poverty
b. Achieving zero hunger
c. Promoting global health and well-being
d. Supporting a quality education
e. Fostering gender equality
f. Enabling clean water and sanitation
g. Facilitating affordable and clean energy
h. Supporting decent work and economic growth
i. Enhancing industry, innovation, and infrastructure
j. Reducing Inequality
k. Creating sustainable cities and communities
l. Encouraging responsible consumption and production
m. Supporting action on Climate Change
n. Focussing on 'Life Below Water'
o. Focussing on 'Life On Land'
p. Promoting the values of Peace, Justice, and Strong Institutions

4. Which of the following best describes 'digital humanities' to you?
   a. Digital Humanities is an area of scholarly activity at the intersection of computing and the disciplines of the humanities, including the critical analysis of the intersections between computing and the academe, society, and culture.
   b. Digital Humanities involves the intensive use of computer software and hardware to retrieve, analyse, and present humanities data at the service of humanities research questions and problems.
   c. Digital Humanities captures and describes the innovative process (both disruptive and incremental) that surrounds the evolution of all aspects of humanities research, through the application of electronic technologies and processes.

Noteworthy features in the responses

In their responses to **Question 1** respondents reported that – from the options available – their past research had focused overwhelmingly on Option E 'Content Creation and Consumption' (88% rank 1st).[6] Whilst Option E also remained the highest ranked response with regards to their future research (40% rank 1st), it declined in importance as a future research priority, replaced with Options A (Trust, Identity, Privacy and Security), C (Sustainable Digital Society), and D (Equitable Digital Society). Option C also grew in importance (ranked third or higher) as a future research priority with all but one respondent.

In their responses to **Question 2** respondents reported that – from the options available – their past research had focused on Option B 'Culture, Creativity, and an Inclusive society' (50% rank 1st). Responses reported little prioritisation of Option E 'Climate, Energy and Mobility' in their previous research: indeed, only 4 of the 10 respondents ranked it as a

6 In principle, a focus on 'Content Creation and Consumption' could include studying content and/or creating content related to sustainable digital society, or even methodological exploration of sustainable methods in content creation and consumption. Equally, for Question 2 a prioritisation of research on 'Health, Demographic change, and Wellbeing' could include studying the relationship between climate change and demography. To understand these nuances, more work would be needed to surface the examples respondents had in mind when prioritising one option over another.

priority at all. This picture changed, however, when reporting on their future intentions, where Option B was displaced by Option A (Health, Demographic change, and Wellbeing) as the highest ranked priority, and 'Climate, Energy and Mobility' become more prominent, specifically:

- One respondent ranked Option E first as both their past and future research priority.
- Three respondents ranked Option E second as their future research priority, and of these only one had ranked Option E second as their past research priority.
- Two respondents ranked Option E fourth as their future research priority.
- Two respondents ranked Option E fifth as their future research priority.

In their responses to **Question 3** the largest number of respondents reported that – from the options available – their past research had focused on Option D 'Supporting a quality education' (44% rank 1st). Two-thirds of respondents chose at least one climate crisis related option among their six priorities, and just under one-quarter of all options chosen by respondents related to the climate crisis, specifically:

- Four respondents reported prior research focus on Option M 'Supporting action on climate change', ranking it as their second, third, fourth, and fifth priority respectively.
- Four respondents reported prior research focus on Option K 'Creating sustainable cities and communities', with two ranking it as their third priority and two their fifth.
- One respondent reported prior research focus on Option L 'Encouraging responsible consumption and production' and ranked it as their second priority.

Moving to future intentions, there was no clear pattern of priority for any single option. 90% choose at least one climate crisis related option among their six priorities. Of the 49 options chosen as priorities, two were chosen on six occasions (Option K 'Creating sustainable cities and communities', Option I 'Enhancing industry, innovation, and infrastructure') and two on five occasions (Option M 'Supporting action on climate change', Option J 'Reducing Inequality'). Compared with responses on past priorities, the proportion of all options chosen that related to the climate crisis grew modestly to 31%. One respondent ranked a climate crisis related option as their top priority (Option M), two as their second priority (Option M), and three as their third (Option K = 2, Option L = 1).

Reflections

This data set is small and should not be used to draw firm conclusions about the environmental activities and strategies of DH research groups. Nevertheless they provide hints. For example, looking across the responses to the three questions, we observe more responses to the questions on 'future' priorities than those on 'past' priorities. This suggests an ambition to do more strategic work in the future. Alongside this we observe that climate crisis related priorities had greater resonance when respondents considered their research ambitions than it did when they considered their past research. This indicates that as DH research groups think more strategically, the climate crisis is given greater prominence within those strategic plans.

Due to the small size of our dataset we are not able to offer any reflections on differences in

responses based on geography or the type of DH research group. We note for completeness that in their responses to **Question 4**, half of the respondents chose Option A, though many also chose to write in clarifications to their answers.

Finally, our survey also generated comments and responses via email, including a small number who reported a decision not to complete the questionnaire, explaining that the prioritised lists did not have relevance to their DH research group. This is discussed further in the 'Discussion' section, and so they could not complete the questionnaire.

Desk Research

To complement our survey, we conducted desk research that examined climate crisis related activities or strategies on the live public facing websites of DH research groups. This research sought to find the presence of the climate crisis related work on these public facing websites, rather than to estimate the capacity allocated to work in this area, to establish the regularity of that work, to ascertain longevity of engagement (e.g. through the analysis of web archives), or to analyse the results thematically.

This work was then less systematic than the survey, and by using public facing web pages had a number of weaknesses:

- Research groups or faculty may not have recently updated their public facing web pages or have full control over their content;
- Depending on the higher education funding context in a given country, public facing web pages may serve different purposes: asserting prestige, attracting students, listing outputs and projects;
- Past events may be archived differently between research groups;
- Established projects and work may be over-represented at the expense of emergent themes or ideas.

Nevertheless, public facing web pages – and linked profiles, project pages, and publications – are performative windows into the interests, concerns and values of digital humanities research groups. They are therefore ideal for a study like ours that seeks not to establish the interests, concerns and values of digital humanities research groups, but rather to prepare the ground for greater collaboration and engagement in this space.

What we found was encouraging. Desk research focused on the 50 universities with digital humanities capacity that were identified from WURR. Of the research groups that did not or were unable to respond to our survey, 13 include information on their public facing web pages that indicate an engagement with the climate crisis as a topic of relevance and importance to their digital humanities community. The identified engagement takes a variety of forms. Digital humanities research groups contribute and cross-list climate change related events, such as environmental humanities symposia.[7] They publish summaries of their involvement in projects including VR-oriented collaborations with practice based

7 https://blogs.ntu.edu.sg/dh/2018/09/17/253-3/ (accessed 29 March 2021).

researchers,[8] public history initiatives on conservation and ecology,[9] policy work on communicating climate change,[10] and fieldwork on marine geography.[11] Digital humanities research groups describe their strategic priorities as including topics such as smart cities and digital environmental humanities.[12] Individual research profiles report research activity that works between the digital humanities and climate change.[13] Digital humanities research groups are closely connected with comparable on-campus research groups more directly orientated towards the climate emergency, including those in the fields of environmental humanities,[14] environmental data science,[15] media and communication,[16] digital ethnography,[17] and liberal arts.[18] And these research activities feed into teaching programmes via doctoral seminars and reading groups.[19]

8 https://blogs.ntu.edu.sg/dh/project/tangibleintangible/ (accessed 29 March 2021).
9 https://www.kqed.org/quest/delta-map (accessed 29 March 2021); https://web.stanford.edu/group/spatialhistory/cgi-bin/site/project.php?id=1089 (accessed 29 March 2021).
10 https://dilac.iac.gatech.edu/dilac-projects/climate-change-visualization (accessed 29 March 2021).
11 https://libds.nus.edu.sg/river (accessed 29 March 2021).
12 http://www.ehumanities.nl/delft-university-of-technology/ (accessed 29 March 2021); https://uniweb.mcgill.ca/themes/2944/people (accessed 29 March 2021).
13 https://densitydesign.org/person/michele-mauri/ (accessed 29 March 2021); https://www.tudelft.nl/tbm/over-de-faculteit/afdelingen/values-technology-and-innovation/people/lecturers/dr-rf-rockwell-clancy (accessed 29 March 2021); https://www.helsinki.fi/en/helsinki-centre-for-digital-humanities/network-of-collaboration (accessed 29 March 2021).
14 https://dilac.iac.gatech.edu/dilac-projects/climate-change-visualization (accessed 29 March 2021).
15 https://www.qmul.ac.uk/media/news/2020/se/queen-mary-appoints-director-for-new-digital-environment-research-institute-.html (accessed 29 March 2021).
16 https://tu-dresden.de/gsw/forschung/nachgefragt-wissenschaftler-im-portrait (accessed 29 March 2021).
17 https://digital-ethnography.com/research-programs/ (accessed 29 March 2021).
18 https://dilac.iac.gatech.edu/ (accessed 29 March 2021).
19 https://www.hf.uio.no/english/research/strategic-research-areas/oseh/news-and-events/events/reading-group/readinglist_lecturerlist.html (accessed 29 March 2021).

Discussion

This research has investigated the prioritisation of the climate crisis in the past, present, and future work of DH research groups. We found that whilst DH research groups have not seen their past work as having prioritised the climate crisis, they are engaged in a range of climate crisis related activities from events and projects, to networking and teaching. And when asked about their aspirations for future work, DH research groups report an intention to work more strategically and within that to prioritise the climate crisis. Given the growing awareness of the link between computationally intensive work and energy consumption,[20] and given the growing literature in data science,[21] artificial intelligence research,[22] energy policy,[23] and digital preservation[24] on the need for a rapid pivot towards environmentally sustainable, just, and ethical practice, we welcome the reported intentions of our respondents.

As a small piece of research conducted during a health crisis, our findings are only partial. Our methodology for selecting DH research groups to investigate in detail has overlooked some important research,[25] including work in allied fields.[26] But having identified from a small sample set both intersections between DH research groups and the climate crisis, and a direction of travel towards greater prioritisation of the climate crisis in their research, a wider scoping review on environmental action in the DH research community strikes us as an important next step.

To do this well, we will need to work in partnership, not only to gather and analyse greater volumes of data, but also to revise the research design such that it is attentive to intelligence gathered during our interactions with DH research groups. Notably, these interactions provided insights into how local and regional factors create differing levels of engagement

20 Karen Hao, 'Training a Single AI Model Can Emit as Much Carbon as Five Cars in Their Lifetimes', *MIT Technology Review*, 6 June 2019, https://www.technologyreview.com/s/613630/training-a-single-ai-model-can-emit-as-much-carbon-as-five-cars-in-their-lifetimes/.

21 Emily M Bender et al., 'On the Dangers of Stochastic Parrots: Can Language Models Be Too Big?' (2021) https://doi.org/10.1145/3442188.3445922; Eva García-Martín et al., 'Estimation of Energy Consumption in Machine Learning', *Journal of Parallel and Distributed Computing* 134 (2019) https://doi.org/10.1016/j.jpdc.2019.07.007.

22 Roy Schwartz et al., 'Green AI', *ArXiv:1907.10597 [Cs, Stat]* (2019) http://arxiv.org/abs/1907.10597.

23 The Shift Project, 'Lean ICT: Towards Digital Sobriety' (2019), https://theshiftproject.org/en/lean-ict-2/; Lorenzo Posani, Alessio Paccoia, and Marco Moschettini, 'The Carbon Footprint of a Distributed Cloud Storage', *ArXiv:1803.06973 [Cs]* (2018) http://arxiv.org/abs/1803.06973; David Costenaro and Anthony Duer, 'The Megawatts behind Your Megabytes: Going from Data-Center to Desktop', *ACEEE* (2012).

24 Keith Pendergrass et al., 'Toward Environmentally Sustainable Digital Preservation', *The American Archivist* (2019) https://doi.org/10.17723/0360-9081-82.1.165.

25 Notably Bethany Nowviskie's DH2014 keynote 'Digital Humanities in the Anthropocene', published in *Digital Scholarship in the Humanities* in 2015 (https://doi.org/10.1093/llc/fqv015), or recent work emerging from King's College London Department of Digital Humanities: Liliana Bounegru et al., '"We Only Have 12 Years": YouTube and the IPCC Report on Global Warming of 1.5ºC', *First Monday*, (2020), https://doi.org/10.5210/fm.v25i2.10112.

26 For example, New Interfaces for Musical Expression (NIME) Conference Environmental Statement ((26 October 2020) https://www.nime.org/environment/

with ‘challenge-led’ research, as well as resistances to ‘challenge-led’ research planning of the kind our survey had taken inspiration from. For example, one respondent reported that in their national context, challenge-led research had a mixed-to-poor reputation among many humanities researchers as a result of humanities research being deprioritised in challenge-led research funding allocation. Another respondent indicated that challenge-led research was ill-suited to humanities research because humanities research was not (and should not) be instrumental. Here we must acknowledge our standpoint as UK-based academics who operate in a research funding landscape that is challenge-led, who have been acculturated for over a decade to the virtues of ‘impactful’ research, and whose research group relies on a mix of research funding sources – including challenge-led schemes – for its financial sustainability.

At the same time the SHL Environmental Strategy sets out challenge-led goals: to explore and mitigate the carbon intensity and ecological impact of our work, to advocate for environmental impact to be incorporated into how funders evaluate research proposals and award funding,[27] to feed the reality of the ecological emergency into shared research agendas, to explore the role of the digital in transitioning to a low carbon society, to resist ‘siloing’ environmental perspectives outside DH research or vice-versa, to make ‘everyday’ interventions at the same time as advocating for system change, to underscore the materiality of digital infrastructures. We hope that DH research groups share our desire to work on these challenges, and can see the value in being instrumental in the face of a crisis like the environmental emergency. This is not to deny that there are other crises that demand the attention of humanities researchers: there are, and in many ways these crises intersect;[28] environmentalism is intersectional. Rather it is to say that the responses to our survey have provided a valuable reminder of the varying perspectives on ‘challenge-led’ research that exist within the global humanities community, and a commitment to proceed with a sensitivity to local and regional rationale for being suspicious of or resistant to humanities work that looks or feels instrumental.

27 We note that Wellcome now has a carbon offset policy as part of their grant conditions, see https://wellcome.org/grant-funding/carbon-offset-policy-travel (accessed 28 April 2021).
28 Bender et al., ‘On the Dangers of Stochastic Parrots’.

Next Steps

We believe that DH research groups can play an important role in advocating for environmental justice and in responding to the environmental emergency. SHL has already committed some resources to this work, and will continue to do so through its new 'Experimental Environmentalism' research priority. The results of our research suggest that many DH research groups comparable to SHL share our convictions. We urge the community to get in touch (shl@sussex.ac.uk), to offer their expertise, to help us take forward our proposed next steps, and to suggest alternative uses of shared resources.

- **A wider scoping review on environmental action in the DH community**, surfacing open problems as well as existing policies, methods, tools and perspectives. To do this well we will need partners to gain traction and to analyse results. And we will need to iterate our research design such that it is attentive to intelligence gathered during our interactions with partners and other relevant organisations.
- Like many DH research groups SHL is more than DH, so there is clear value in **understanding comparable work in allied fields**; we note, for example, the New Interfaces for Musical Expression Conference Environmental Statement, the Historians and Sustainability Working Paper, and the eco friendly CryptoArt community (e.g. Clean NFTs). We need to map what those fields are, and work strategically to draw in their problems, policies, methods, tools and perspectives.
- Thinking about the future is different to acting in the future. SHL is keen to **work with the community** to explore how priorities are transformed in the transition from strategy to management, operations, and everyday life.
- SHL is keen to host and co-host event(s) to **bring the community together** to develop actions, next steps, and/or a shared manifesto.

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