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COMMENTARY

Storylistening: a case study in how to include the humanities in evidence provided for public reasoning

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Abstract

There is increasing recognition across all public issues, from the Covid-19 pandemic to the climate crisis, that taking into account a range of types of evidence is essential to good decision-making. It remains far less clear how such evidence, especially that from the humanities, might be gathered and incorporated into public reasoning and what might need to change to enable that to happen. Storylistening provides a framework for the theory and practice of gathering narrative evidence to inform decision-making, especially in relation to public reasoning, as part of a pluralistic evidence base. The framework consists of four cognitive and collective functions of stories that render them of value to decision making: modelling, points of view, identities and anticipation. By describing how to put storylistening into practice, this commentary highlights how the humanities and advisory structures need to evolve, with implications for narrative studies and for the public humanities more broadly.

Keywords

Storylistening, narrative evidence, decision-making, public reasoning, modelling, points of view, identities, anticipation, humanities, advisory structures.

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From the Covid-19 pandemic to the slower-building emergency of climate change, it is clear both that scientific evidence is essential to good government decision-making, and that it is not sufficient (Shah 2020). Knowledge from the humanities and social sciences needs to be more fully integrated into advisory systems, and more humanities scholars need to be ready to play their part in collaboration as well as opposition (Brom 2019). Doing this need not result in a post-modern free-for-all (as some scientists might fear), and should strengthen rather than weaken the impact of the sciences. Our new research looks at one area of interdisciplinary research that is particularly important at a time of misinformation and post-truth commentary: the role of stories. This is not about telling stories, nor about stories' empathetic, persuasive or individual effects (important as these roles can be), but about the cognitive value stories possess: framing the target systems under debate, informing collective identities, functioning as models of the world, and in anticipation of the future (Dillon & Craig 2021). Using this fourfold framework, it is possible to show one way in which the humanities can play a greater role in contributing to well-founded public reasoning: storylistening can create narrative evidence and, as part of a pluralistic evidence base, better inform decisions. Those responsible for expert advisory systems, from the Intergovernmental Panel on Climate Change (IPCC), to national arrangements such as national academies or the UK's Scientific Advisory Group in Emergencies (SAGE), should seek out and incorporate narrative evidence; and everyone – decision-makers, scientists, publics – needs a basic level of narrative literacy. Stories are too important not to be taken seriously.

Narrative evidence complements the science

Everyone knows that stories matter but, particularly in the context of the use of research-based evidence, policymakers and experts rarely ask how, or why, or what to do as a result. Some stories get dismissed as mere entertainment or fiction, and some have too much confidence placed in them: there is a human tendency to storyimbibe and to get drunk on charismatic stories, whether they are based on computational models or a novel. Story*listening*, as a conscious and reflective act creating narrative evidence, is rare. To remedy that, we propose a conceptual framework to help create the conditions in which the task of critical listening to stories as part of public reasoning is possible, expected, and becomes endemic.

Stories may be the only way of collectively thinking through the potential behaviours of complex systems in some cases. A story does not provide scientific knowledge, but narrative evidence enables surrogative reasoning about things about which there is no scientific knowledge, or an alternative approach to, and perspective on, things also known through scientific means. The storylistening framework concerns the collective and the cognitive functions of stories, rather than the individual and the empathetic, and recognises that stories are a form of sense-making in the face of complexity and uncertainty.

Four functions of stories

The framework rests on the definition of four functions of stories, a taxonomy drawn from extensive research into theories of the functions of stories across humanities and social science disciplines, including English, Psychology, Sociology, Cultural Studies, Anthropology, Philosophy, History

and Philosophy of Science, and Futures Studies. These functions apply to both non-textual (transient and malleable) and textual (embedded, embodied, and curated) stories – our more precise language for what might generally be thought of as the distinction between 'narratives' and 'fiction' in common parlance. Whilst our examples often focus on textual stories (due to the authors' expertise), given the ubiquitous nature of stories and their many forms, we hope that experts from across the humanities and social sciences – from the disciplines listed above to Geography, History, Archaeology, the Visual Arts and more – will be prompted to consider how the functions apply to the stories with which their disciplines engage.

A common mistake, particularly in the context of discussion about misinformation, is to treat stories classified as fiction and non-fiction as very different forms of evidence. However, a story positioned as fictional may contain important truths, and any scientific model is itself a form of fiction in the sense that it can only ever represent the world indirectly. More important for public reasoning is the potential contribution of storylistening to better understanding both truths and untruths about a system. Narrative evidence can complement other forms of evidence, challenging and being challenged by those other forms, increasing the overall rigour, and expanding the range of public reasoning.

Framing

Public reasoning is hugely determined by the way issues are framed (Cairney 2015). Framing determines and is determined by the selection of the questions that are taken to matter, the boundary and shape of the target system that is considered, the groups and agents that are included or listened to, and the forms of evidence that are influential. Stories possess cognitive value by providing new *points of view* to inform the framing of the target system and hence the debate.

This is not about creating an empathetic response to an individual or group in order to support their interests (there are surprisingly low levels of evidence for the widely held view that story-reading creates empathy that in turn encourages prosocial behaviour in an individual reader). Instead, storylistening can provide a variety of perspectives on the target system, irrespective of the attributions of emotion to the viewer or the subject. These perspectives need not be human and can therefore also helpfully counter the anthropocentric tendency of public debate, in contexts when what will ultimately matter is robust evidence about the world as it actually is, rather than as some would wish it to be.

Framing climate change and the Earth system from an anthropocentric point of view, as performed in the opening of Pope Francis' 2015 encyclical on climate change, Laudato Si', is an attempt to mobilise positive action by personifying the Earth as one's mother or sister. But it is far from certain that such narrative anthropomorphisation creates empathy that mobilises prosocial behaviour. Such a narrative might in fact distract from the legal and governmental changes necessary to engage differently with the systemic imbrication of the environment and the many species, including humankind, that inhabit it. A story such as Ursula Le Guin's 'Vaster than Empires and More Slow' (1971) offers a different framing, including a variety of human and alien perspectives, bringing together relevant contemporary issues such as AI and climate change, and pointing up the limits of empathy in reasoning.

Understanding collective identities

Through attending to stories' function in the creation of *collective identities*, storylistening enables new ways to explore what those identities are and what they might mean. Storylistening would enable economists to better understand and explain economic events by drawing on narrative evidence about how popular economic stories influence individual and collective economic beliefs and actions (see Shiller 2019 for an exploration primarily of the roles of non-textual stories). Storylistening illustrates the narrative networks and collective characteristics of researchers in AI: stories play a role in research focus, career choice, community formation, science communication, ethical thinking, and modelling of sociotechnical futures (Dillon & Schaffer-Goddard 2022). A textual story such as Barbara Kingsolver's *Flight Behaviour* (2012), set in rural Tennessee, prompts questions about the definition and direction of collective agency in the face of climate change, that complement more orthodox notions of how to incorporate group identities into public reasoning. Research in geography and the environmental sciences demonstrates the role that stories play in the creation and maintenance of social networks formed in response to issues of resource and ecological management (Lejano *et al.* 2013).

Modelling

All public reasoning rests on implicit *models* of the target system. Models – from the physical models of architects to the computational constructs of the IPCC – provide tools to think with, by abstracting parts of the target system and ignoring others. They carry out a range of functions, including providing explanations and enabling anticipation (Calder *et al.* 2018). Although often unacknowledged, stories play an integral part in the creation and use of scientific models and shape the outcomes in areas such as climate change (Shepherd 2019), economics (Morgan 2012; Morgan *et al.* 2022) and epidemiology.

Textual stories also function as narrative models in their own right. Consider the way the novels of Jane Austen give today's reader some sense of the rules of the social game of middle-class life in early 19th century England (but, as models always do, ignore many other aspects of the world at the time, in Austen's case including war and colonialism). In more contemporary examples, for Matt Hancock, the film *Contagion* (2011) served as a narrative model that helped him recognise the importance of an early vaccine strategy (Bland 2021); in Westminster, copies of *The Godfather* are given to young employees because it functions as a useful political 'narrative template' (Freedland in Watkins 2022). The cognitive value of stories in these specific examples points to the need for more systemic and rigorous storylistening. In particular, it is necessary to assess the metonymic legitimacy of a story: not all stories are equally valuable, and not all scale meaningfully between the particular detail of the story and the general points that matter for public reasoning.

To give other textual examples, using deep space flight as a constraint, Kim Stanley Robinson's *Aurora* (2015) explores a model of plausible social and behavioural conditions for a zero-waste world. To create a compelling story in these circumstances, not only the physical constraints and requirements for balancing material cycles must be shown, but also what kinds of governance, regulation, social behaviours and skills a society might need to achieve this. Isaac Asimov's *Foundation* series or Cixin Liu's *The Three Body Problem* (2008), amongst other things, model the limits to and the consequences of imperfect mathematical information in the context of social and

political needs. They grapple with the matters, especially timely in the contexts of the pandemic and climate change, of how societies might act when they know some things, but not everything they clearly need to know in order to act with confidence, and when what they can know changes over time – a situation that scientists may be comfortable with, but which politics finds hard (Craig 2019).

Enabling anticipation

Finally, storylistening enables new forms of rigorous *anticipation*. In a letter to the Queen addressing her question as to why no one saw the 2008 Financial Crash coming, Tim Besley and Peter Hennessy concluded that it was 'a failure of the collective imagination of many bright people' (2009: 10). Storylistening then to the collective anticipations of pre-2008 financial textual stories would have provided narrative evidence that might have allayed that failure (Shaw 2015). Textual stories such as Nevil Shute's *On the Beach* (1957), alongside Herman Kahn's (1960) quantitative modelling of death rates, attempted narrative futures models of the consequences of nuclear war, that in turn informed US policy in the 1960s.

To expand the range of futures that could be considered in today's public engagement and debate, in areas from climate change and AI to the economy, policymakers should look both to provide spaces for the creation of new stories, and to commission careful storylistening to existing stories, especially less dominant ones. One strand of evidence from storylistening that may become increasingly important concerns how societies respond to recurring and multiple risks. In her *Broken Earth* trilogy, N.K. Jemisin models how societies might live with slow violence and catastrophic risks that occur on timescales much longer than a human life.

A thread across the four functions is how the most charismatic stories (like charismatic models or numbers) draw attention towards themselves and away from the spaces around them: stories about climate change as a matter exclusively for the physical sciences to solve, for example, or about humanoid robots instead of distributed systems. Such narrative deficits and locked-in framings in turn preclude public examination of a full set of possible systems, models or futures, and work to exclude some collective identities while prioritising others. Careful listening shows up the spaces left by absent stories and can help balance the forces that cause some wrongly to dominate at a particular time and place.

Narrative literacy needed

To begin to include narrative evidence systematically, the single biggest step for scientists, decision makers and publics is to adopt a level of narrative literacy that precludes false certainty about the roles of stories, and helps determine when to bring in expertise. To be narratively literate means that when the picture of the red-eyed Terminator robot routinely appears alongside news reports of AI, the juxtaposition prompts questions rather than unexamined conclusions. The latter typically range from 'it's fiction so it's irrelevant', to 'it's dangerously associating AI with humanoid killer robots so it will distort public reasoning and lead to unintended outcomes', to 'it's a metaphor for concerns about unstoppable malign powers' (Royal Society 2018). But, just as a generalist handles a bank account or carries an umbrella but would not attempt to model future interest rates or global

average surface temperature, narrative experts are needed for storylistening – to analyse how the dominant stories are functioning, to facilitate access to the range of stories relevant to a particular policy issue, and to identify narrative deficits.

Working across disciplines and across the interfaces between academia, governments and publics while essential (and often extremely stimulating and enjoyable) is rarely straightforward (British Academy 2016). Whilst the arguments presented here pertain specifically to narrative evidence, the consequences of and challenges for incorporating narrative evidence apply more generally to many of the other forms of evidence from humanities and social science disciplines. These challenges are all surmountable, and the prize in terms of public good is too great to sidestep them.

Integrating the humanities

One challenge is that, to be effective, the inclusion of humanities knowledge as part of a pluralistic evidence base requires a fundamental shift from the embedded notion of the lone public intellectual to a more pervasive understanding of the role of the public humanities. In this shift, humanities research would be included routinely as part of a pluralistic evidence base in the next phase of evolution of the systems for gathering experts and knowledge that inform public reasoning (SAPEA 2019; OECD 2020). Those designing advisory systems need to consider when and how to seek out narrative evidence in addition to scientific evidence. To start with, storylistening should be included in mechanisms from the UK's SAGE to the IPCC (a review of the creation of the IPCC's 2018 report *Global warming of 1.5°C* authors showed that none of 269 chapter authors were from the humanities).[1] Narrative evidence should be included in evidence synthesis (Donnelly *et al.* 2018) as a matter of routine. In some cases, as with the sciences, creating the incentives and supporting the behaviours that allow the development of long-term relationships between researchers and practitioners and policymakers will help to raise the quality and efficiency of dialogue, and inform research questions (Owens 2015).

For their part, humanities researchers may also need to be better at explaining what they mean by rigour in their fields. There is no such simply established thing as 'the humanities method' that might be considered equivalent to 'the scientific method' or the Randomised Control Trial. But the guarantors of rigour in the humanities are perhaps not so different as might be imagined from those in the sciences: robust literature reviews; detailed close attention to the object of study using the tools and methods appropriate to that object; discovery of new objects of study; evidence-based conclusions; peer review; disciplinary interrogation and cumulative knowledge. Explaining this might not be as straightforward as in the sciences, but that does not mean that to include humanities knowledge is 'irrational'. Methods need to be appropriate to what one is trying to understand – one would no more use a synchrotron to study a novel than one would use narratology to study an atom.

Routine description and communication of the methods and structures guaranteeing rigour in the humanities would help enable humanities academics to be more easily incorporated into the structures of existing expert advisory committees. It would give decision-makers more confidence

[1] Note that attributions are inevitably subject to interpretation, and that the 269 authors include individuals who are counted more than once, because they appear as authors on more than one chapter.

to ask questions of the academics and to act on their answers, and to take note when the expert provides knowledge that is challenging or wholly unexpected. It would build well-founded confidence in humanities expertise on the part of decision-makers and publics, further legitimate humanities expertise externally, enable its more widespread incorporation into public reasoning, and potentially contribute to developments and advancements within and across its disciplines.

Putting storylistening into action

Storylistening's fourfold framework is a starting point. We are already working to put it into action through collaborative projects with decision-makers on the value of the historical study of mid-20th century nuclear storylistening, on storylistening to gather narrative evidence to inform policies on the uses of Space, and on 'risklistening' to find new ways for decision-makers to be able to act on the information about future risks that is readily available to them. We hope that this leads to embedded practices of storylistening in particular, and to the incorporation of a wider range of types of evidence from the humanities in general.

There is no doubt that independence, and sometimes explicit opposition (for instance to the state, or to neoliberal university systems) is necessary. They provide a key demonstration of the public value not just of the humanities in fact, but of academia in general. But they do not and must not exclusively define the position of the humanities. There has to be room for an understanding of the humanities as a valuable site of knowledge production of use to existing structures and institutions of public reasoning and decision-making. There is a need for academic structures and values that support humanities academics willing and able to engage and collaborate with those structures and institutions – for example government and industry – which are equally the very ones that might require or benefit from humanities critique.

It is also important to note that to engage is not to relinquish the possibility of critique, although it may provide new insights and understandings that prompt a reconsideration of the beliefs and assumptions underlying the critique. In a new self-conception of the humanities, there is space for both independence and engagement, with the potential for critique happening at both sites. Achieving this is no easy task. The 21st-century humanities would benefit from engaging in a futures exercise to imagine its own possible, probable, and preferable futures, as well as the multiple pathways it might follow, and even how to survive in an environment of recurrent risk. By excluding themselves from the compromise of engagement, by precluding the possibility that not all engagement might be complicity, humanities scholars are denying public reasoning all of the best the humanities can offer.

Conclusion

Covid and climate change are amongst the signals, not weak signals, that humanity needs to change and adapt over the next few decades: it needs all possible forms of evidence to help it do that. What is needed now is for innovative practitioners to start asking for the narrative evidence that might be relevant to their specific and pressing questions, and for researchers to take on the challenge of creating it.

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