

Insights from IT History: the search for accessibility and effectiveness.

WORKING PAPER

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The Archives of IT has taken as its motto 'Capturing the past, inspiring the future', a sentiment evoked in every one of its interviews. Yet, how can the past inspire the future concretely speaking? Can AIT step beyond a purely aspirational motive to design and deliver opportunities for learning among budding digital entrepreneurs and even experienced ones?

This paper will argue that the holdings of the Archives of IT offer an outstanding opportunity to promote a kind of 'prospective history' – one that looks to the future – within the field of digital entrepreneurship. Such a use of history, sometimes known as 'future-perfect thinking', has emerged in the discipline of Business History as a way of mobilising the insights of the past for future strategic and tactical planning.¹ Through the lens of the 'prospective', an attempt can be made to deliver actionable insights from the historical record, drawn from AIT's collection of over 200 interviews. Questions arise, however, concerning how these historically-inspired future insights can be best communicated to target audiences, and what conditions are most likely to allow those audiences to master historical insights and implement them in their business thinking and practice.

This paper will address three problems. First, it will consider why the AIT remain underexploited. It will argue that this is a challenge of translation in which the needs of the AIT's target audience ought to be noted and accounted for in the design of any 'product' that AIT offers the public. Second, it will consider digital storytelling as one potential solution to the challenge of translating the actionable insights wrapped up in AIT's interview database. How do digital stories promise to cross the divide that separates AIT from its target audience? Third, the paper will argue that the medium of

¹ Pitsis, T.S., Clegg, S.R., Marosszeky, M., and Rura-Polley, T. (2003) Constructing the Olympic dream: a future perfect strategy of project management. *Organization Science*, 14, 5, 574–590. <https://doi.org/10.1287/orsc.14.5.574.16762>.

digital stories must be deployed in ways that allow the target audience to connect these actionable insights with their own experience and to draw on them to help address future planning challenges. The paper will propose that one solution to this challenge may lie in creating adaptive participatory storytelling exercises through which the participants use narratives of the past to work out imaginative scenarios for their own futures. Combining digital stories of the past with adaptive participatory storytelling exercises, entrepreneurs and other audiences could recontextualise and apply what they learn about the past and what they know of their own present, to imagine potential narratives about themselves in the future.

Why are the AIT underexploited?

The resource that AIT constitute is immensely valuable. They draw their power from the aggregation of experiences, insights, and reflections gathered through the oral history process, collected before the resource that such memories represent has been lost.² The availability of both transcript and audio recording in AIT results from a felicitous design choice concerning how the archives have been assembled, and mirrors practices that scholars have praised for their accessibility.³ The transcripts allow not only classic, qualitative fine-grained analysis of the interviews but could also facilitate some of the newer approaches to large-scale textual corpora (collections of texts) that draw on the power of big data analysis to identify patterns otherwise only faintly discernible.⁴ The complete transcripts provide historians with a huge advantage over the summary transcripts that sometimes accompany online oral history repositories. Long may it remain so.

Nevertheless, the Archives remain an underused resource. Video hit figures are low on the videos hosted on the AIT Youtube channel: <https://www.youtube.com/@techpeoplestories/featured> Interview landing-page hits will be higher but not substantially so. Paradoxically, this resource which digital technology makes available with a few mouse-clicks from any corner of the world still

² KROEZE, R., & VERVLOET, J. (2019). A Life at the Company: Oral History and Sense Making. *Enterprise & Society*, 20(1), 33-46. doi:10.1017/eso.2018.106

³ See, for example, the [Audio-Video Barn Collection](#) studied in: Robert E. Warren, Michael P. Maniscalco, Erich K. Schroeder, James S. Oliver, Sue Huitt, Douglas Lambert & Michael Frisch (2013) Restoring the Human Voice to Oral History: The Audio-Video Barn Website, *The Oral History Review*, 40:1, 107-125, DOI: 10.1093/ohr/oht032.

⁴ See, for comparison: Henry Jones & Brian Sudlow (2022) A contemporary history of Silicon Valley as global heterotopia: Silicon Valley metaphors in the French news media, *Globalizations*, 19:7, 1122-1136, DOI: 10.1080/14747731.2022.2034308

requires that old fashioned, stubbornly persistent variable of real time for its full exploitation.

Now, for some of the target audiences of the Archives of IT, time is a scarce resource. Young entrepreneurs, one of the constituencies who could really benefit from AIT's resources, are consistently poor on time planning and use.⁵ In a sense, their own wider needs as entrepreneurs, with all the responsibility that they entail, impede their opportunity to access time-costly resources. A similar point could be made also about the young adult audience whom AIT desires to inspire with regard to the value of the technological professions. Generation Z, those born between 1997 and 2013 and, therefore, in the age range of 10-26, show a marked preference for media dominated by short-video formats and what is now sometimes called 'snackable' content.⁶ At around one-hour length, the interviews in the database of the AIT offer richer pickings, rather than 'snackable' digital morsels.

AIT's development of video highlights, clips or other shorts, represents, therefore, a welcome and prudent innovation. These offerings in AIT clearly correspond to the different needs that several target audiences display for media assets that are brief, or to use again the metaphor, 'snackable'. Yet the key factor here is audience need. In this light, we argue that the AIT also has the opportunity to create short adaptations of its interviews, working in conjunction with its interviewees, to ensure that alongside the interviews there are digital stories that extract one or a number of actionable insights from the interview given. Drawing on functional translation theory which identifies target audience need rather than fidelity to a source as the key criterion of adaptation, we argue that the adaptation of the longer interviews into short-film formats or digital stories should be judged not on their fidelity to the original source interview but on the way in which they adapt that source to the needs of a new audience.⁷ Since these new-audience needs arise in a different cultural or

⁵ Moren Lévesque and Ute Stephan, 'It's Time We Talk About Time in Entrepreneurship', *Entrepreneurship Theory and Practice*, 2020, Vol. 44(2) 163–184 DOI: 10.1177/1042258719839711; Unnati Kapoor and Shuchi Sinha, 'Transitions and implications of time perspectives: A qualitative study of early-stage entrepreneurs', *Journal of Business Venturing Insights*, Volume 18, 2022, <https://doi.org/10.1016/j.jbvi.2022.e00339>.

⁶ Cortés Quesada, J. A.; Barceló Ugarte, T. y Fuentes Cortina, G. (2022). 'Audio-visual consumption of Millennials and Generation Z: preference for snackable content'. *Doxa Comunicación*, 36, <https://doi.org/10.31921/doxacom.n36a1687>; Carl Lindholm, 2023, *Short-Format Video Consumption: Evaluation of Key Quality and UX Aspects for Generation Z*, Master thesis, Uppsala University.

⁷ Christiane Nord, 'Functionalist approaches', *The Routledge Handbook of Translation Theory and Concepts*, Reine Meylaerts and Kobus Marais (eds) (Routledge, 2023).

social context than the ones that led to the interviews in the first place, it is right that the social or cultural norms of this target context should shape the adaptation, rather than subjecting the adaptation to the norms that governed the original source. AIT's interviews are very properly aligned with the norms of oral history collection, but these belong to a specific context and set of purposes that are by no means universal in character. In contrast, adaptations of the interviews or extracts from them should respect the norms or circumstances prevailing among new target audiences, such as lack of time or preference for brevity.

It could be objected that bowdlerizing the interviews by reducing them to such soundbites risks making a travesty of the wealth of experience that the complete interviews capture. While it is true that adaptation risks the dangers attendant on any popularisation, this objection to popularisation makes two vital errors.⁸ First, it underestimates the power of target audience need to shape demand; the question is not how worthy the interviews are in themselves but the extent to which a new audience in a new context perceives the desirability of listening to them. We assume here that the new audience tailors its desires to its perceived needs, rather than its real needs.⁹ Second, the objection also underestimates the power of free-to-access samples in the successful marketing of digital products.¹⁰ In this sense, digital story adaptations of extracts from the interviews could be seen as points of entry to the longer collection. Such digital story adaptations might function as boundary objects allowing the needs of different communities – the interviewees, the curators of AIT, and its target audiences - to converge.

The challenge for AIT, therefore, is to continue to work out ways in which the rich resource constituted by its collection of interviews can be adapted to create easy-access entries. Once we have explored how to evolve the desired easy-access entries, we can also consider how they might be most effectively deployed.

⁸ On understanding the risks of popularization of academic research, see: Hilgartner, S. (1990). The Dominant View of Popularization: Conceptual Problems, Political Uses. *Social Studies of Science*, 20(3), 519-539. <https://doi.org/10.1177/030631290020003006>

⁹ Mark Ligas, People, Products, and Pursuits: Exploring the Relationship between Consumer Goals and Product Meanings', *Psychology and Marketing*, Vol. 17(11):983–1003 (November 2000), 983-1003.

¹⁰ Li et al, 'Optimal Design of Free Samples for Digital Products and Services', *Journal of Marketing Research* 2019, Vol. 56(3) 419-438, DOI: 10.1177/0022243718823169

Part 2 Digital storytelling

One short-form media asset that could help the accessibility of AIT's interviews is that of the digital story. Through this audio-visual genre, longer narratives in the first or third person can be abridged to a concise, 'snackable' length – typically 2-4 minutes – in order to relate the essence of some event, impression or insight. For our project [Insights from History](#), we have begun to create a collection of such digital stories. The insights of the latter are drawn from a systematic review of academic literature about the industrial revolutions, undertaken for the [Interact Network](#). The collection mixes professionally produced videos with our own prototype films created on the [Wevideo platform](#).

To give some concrete examples, we took a 2015 article by John Murray and Javier Silvestre entitled 'Small-scale technologies and European coal mine safety, 1850-1900', published in *The Economic History Review*. We then drew from it an insight into the relationship of small-scale technologies to large ones, and we worked with [Firehaus](#), a Bristol-based branding consultancy, to produce the following digital story entitled 'Small scale, big impact':



In a similar way, we took a 2017 article by Devin Kennedy entitled 'The machine in the market: Computers and the infrastructure of price at the New York Stock Exchange, 1965–1975', published in the journal *Social Studies of Science*, and drew from it an insight into the advantages and blind spots of technological innovation. Then I animated a version of the film using WeVideo, basing the story around a first-person narrative about my own pension investments:



These digital stories are in no way slavish translations of the histories related in the original articles. We took the original articles only as an ‘offer of information’¹¹ which we then reshaped in view of what we considered their potential to meet the needs of an audience of manufacturers. Inspired by the Berkeley’s StoryCenter’s seven steps to digital storytelling, our process uses a three-step design:

- First, we deploy a hook of some kind to draw in the audience. We prefer a practical dilemma, although those who trained us preferred a person-centred story hook to draw in the audience. The aim is to bring the viewer to an awareness of some need that must be taken care of.
- Second, the digital story then relates a relevant slice of the narrative drawn from a historical article. It is important to observe here that the lesson we draw from the narrative will be shaped by the potential insight that we want to deliver, and also that our agenda is usually distinct in each case from that of the original research we are drawing on. The selection of material that we make for the film is not shaped by the demands of the historical discipline, although we observe authenticity as much as possible. Rather our adaptations are responsive to the needs of the end user and the potential insight that they will take away. This, we argue, is still history but it is applied history, or at least it is a form of history that is more applied than speculative in nature. Many parallels for such an approach to history exist, both in book form or in film form, from documentaries and docudramas to full-fledged historical films that admittedly vary in their respect for authentic historical representation.

¹¹ Vermeer, Hans J. 1987. “What does it mean to translate?” *Indian Journal of Applied Linguistics* 13(2): 25–33.

- Third, by the close of this narrative, we are ready to deliver our take-away lesson that we are labelling in this paper hindsight. Hindsight is retrospective insight, normally associated with having made a past mistake. Nevertheless, hindsight literally means looking backwards, and it is in this sense that we use the word here.

To sum up, the process is:



Our three-step process generates a script which is then animated, either professionally as in the case of the coalmining video, or by ourselves as in the case of the New York Stock Exchange video.

The logic underpinning this process is straightforward. The articles contain valuable insights beneficial to a manufacturing audience who would almost certainly never access them in the original format. Manufacturers, like entrepreneurs, do not have the time and probably would not be comfortable in the academic world to which the articles belong. Our digital adaptations, therefore, are a potential game changer in terms of creating entry points for manufacturers to encounter some of the resources in the history of technology and industry. Not only do they offer to a new audience entry into the past; they also draw on historical insights that, arguably, the original authors may not have even noticed because they lie outside the norms shaping academic production. The potential of these stories to affect change is yet to be fully demonstrated, but since their impact has been seen in other fields,¹² our hypothesis is that our films can contribute to manufacturers' activities, bringing about change either in terms of their thinking or in terms of their behaviour.

Part 3 From hindsight to foresight and beyond

What remains, therefore, is to consider *how such digital stories can bring about change*. In the case of our own project, our long-term aspiration is that manufacturers interested in the digital transition will be able to use these stories as a means of reflecting on their own challenges and future plans for implementing digitisation in their businesses. As we read the historical record of previous industrial revolutions, we see much potential for today's manufacturers to draw lessons from these narratives and

¹² de Jager, A., Fogarty, A., Tewson, A., Lenete, C., & Boydell, K. M. (2017). Digital Storytelling in Research: A Systematic Review. *The Qualitative Report*, 22 (10), 2548-2582. Retrieved from <http://nsuworks.nova.edu/tqr/vol22/iss10/3>

to find ways of applying those lessons in their own operations. In this sense, there is nothing new under the sun. Like the Archives of IT, we are trying to capture the past in order to inspire the future.

Nevertheless, we would argue that the adaptations in digital story format, while necessary to attract a new audience to histories of technology and industry, are yet insufficient in themselves to ensure that their viewers will be inspired to apply these lessons in their own businesses. While the digital story format allows us to capture the past in a more ‘snackable’ format, there is still some work to do to inspire the future. The question, therefore, concerns how entrepreneurs, or others, use such stories as a tool to reflect on their own challenges, and imagine ‘prospectively’ how they can solve them.

We are at the beginning of this part of our project, so what we argue here will remain exploratory and hypothetical. Nevertheless, two issues arise for initial consideration. The first concerns how we can turn hindsight into foresight. The second concerns how individuals can benefit from the hindsight that each digital story attempts to articulate.

In academic journals, there is a growing literature in answer to the first question. One of the most significant interventions in the field was made by Suddaby et al. where a team of researchers took Teece, Pisano, and Shuen’s map of “dynamic capabilities” in organizations and mapped out ways in which history could be used to support them.¹³ The dynamic capabilities identified by Teece, Pisano, and Shuen consist in (i) sensing opportunities, (ii) seizing them, and (iii) reconfiguring current resources to meet the demands of a changing environment.¹⁴ In response, Suddaby et al. argue that greater historical awareness, understanding and reflection can nourish these three capabilities: first, by increasing decision-makers’ awareness of opportunities unleashed by technological change across products and market; second, by mobilizing resources through rhetorically using history to change perceptions and shift motivations; and third, by engaging in future-perfect thinking (i.e. how things *will have* changed) to imagine how the future will be different from the present. It is thereafter in the hands of decision-makers to evoke imaginatively what the future will look like -

¹³ Suddaby R, Coraiola D, Harvey C, Foster W. History and the micro-foundations of dynamic capabilities. *Strategic Management Journal*. 2020;41:530–556. <https://doi.org/10.1002/smj.3058>

¹⁴ Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 509–533.

something we see concretely in the words of technology leaders on a daily basis. We are on our way here to understanding how the hindsight of history can become the foresight of business, but we still have some way to go.

Coming now to the second issue I noted above, how could the insights from historical cases, accessed through digital stories or other engagements with heritage, serve as the basis for the kinds of actions envisaged by Suddaby et al. in their work on dynamic capabilities? One solution we are considering could be adapted from the work of our colleague Antonia Liguori at Loughborough University. Liguori is a storytelling specialist whose most recent work concerns use of storytelling in the context of a drought and risk management project with the pithy acronym of DRY – [*Drought, risk and you*](#). This project aims to mobilise understandings of drought and its risks in order to build better resilience in communities threatened by drought in the UK and elsewhere. While this seems a million miles away from a business or manufacturing scenario, there are in fact many connections. DRY uses storytelling to engage with the challenges of fast changing environments and resources, with new opportunities or risks for actors, with complex networks of human and non-human elements, and with the possibility of finding potential solutions to existential threats. In a variety of ways, therefore, the spectrum of factors in the DRY storytelling project runs parallel to the spectrum of factors faced by (i) manufacturers considering or engaged in digitisation, (ii) new entrepreneurs engaged in building digital businesses, or (iii) even young adult audiences facing the rapidly evolving employment landscape of a digitally shaped future.

How then did DRY use storytelling in the context of building drought resilience? In the context of storytelling workshops, Liguori and her team worked with participants from the scientific and lay community to draw on the power of popular and professional understanding of drought science to co-design stories about potential futures for drought-threatened areas.¹⁵ It was not a matter of encouraging participants just to passively consume existing scientific accounts of drought risk. Rather, Liguori's research showed the potential of participatory approaches to bring all participants, lay and professional, to better appreciation of potential future scenarios through the medium of storytelling.

¹⁵ Liguori A, McEwen L, Blake J and Wilson M (2021) Towards 'Creative Participatory Science': Exploring Future Scenarios Through Specialist Drought Science and Community Storytelling. *Frontiers in Environmental Science*. 8:589856. doi: 10.3389/fenvs.2020.589856

To apply similar practices to our own project, storytelling workshops could be envisaged in which participants would encounter digital stories about the past. Then, having reflected on the factors and variables that these narratives raise, they might undertake exercises to envisage what their own futures look like, through creation of a script or storyboard that sets out the terms of their future scenario. The encounter with the past could operate as both a curative and a positive catalyst. As a curative, historical narratives could serve to disrupt cognitive biases that prevent participants from imagining how they could sense, seize, and reconfigure opportunities that lie ahead. In this regard, we hypothesise that encountering historical cases that model dynamic capabilities might act as a welcome correction on the impact of such biases on future scenario creation. Likewise, encountering the past through short-film formats could be a positive catalyst to help participants negotiate the gaps between their perceptions of their own capacities and the challenges of digitisation. We hypothesise that these gaps will be more easily negotiated when considered in the light of how historic actors have negotiated similar gaps in earlier phases of industrial transition. In this process, they could assess the plausibility of future scenarios by judging them against the subtle insights that historical knowledge can furnish.

All this said, it should be stressed that there are clear limitations to the possibilities such protocols might deliver. The future is unknowable almost by definition, and some factors – Black Swan events, for example – are impossible to envisage. Nevertheless, every future has to be prepared in some way, and visualisation of potential futures stands as a powerful practice within the field of business. If such visualisation could be shaped by a better knowledge of historical experience, that truly would be a case of having captured the past to inspire the future.¹⁶

Conclusion

Will these and other procedures allow us and the Archives of IT to turn hindsight into foresight in a way that really inspires the future? In a sense, that is not ultimately our task. We argue, rather, that our task is only to facilitate an occasion for new audiences to meet the legacy of history and to help them imagine where such knowledge can

¹⁶ Richter et al, Advancing the potential impact of future scenarios by integrating psychological principles. *Environmental Science & Policy*, Volume 140, February 2023, Pages 68-79, <https://doi.org/10.1016/j.envsci.2022.11.015>.

lead them, be they manufacturers, new digital entrepreneurs, or young audiences looking to build their future.

In 2024 we will be producing another set of digital stories with Firehaus and under our own steam. We aim for at least one of these videos to be drawn from the Archives of IT collection. By April, we aim to begin testing how our digital stories can bring about changes in a manufacturing audience. Our hope is that these tests will allow us to suggest a more concrete roadmap for the Archives of IT in its ambition to inspire the future. It is good to be working together.