Title page

Title: What the Dickens: post-mortem privacy and intergenerational trust

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Abstract: The paper argues that protecting post-mortem privacy is not solely beneficial for the deceased and their relatives but enables intergenerational data-sharing. However, legal approaches alone are unlikely to generate the trust required and need to be supplemented with tools that assist data subjects in controlling what data they risk sharing more efficiently and, which they prefer to delete. Using the example of Dickens's "Bonfire of letters" as an example, we argue that the main challenge for law and digital technology is the cumulative risk of data breadcrumbs, which are likely to be individually harmless. Based on research within the EPSRC project "Cumulative Revelations of Personal Data", we discuss how our findings indicate possible avenues to assist in more efficient intergenerational data sharing.

1) Introduction

The discussion surrounding post-mortem privacy often approaches the concept as a tool to protect the deceased from reputational damage, with close relatives who have an emotional stake in the posthumous reputation of a loved one as possible indirect beneficiaries.[1] Once framed in this way, the legal issue becomes a zero-sum game that pitches the interests of the deceased against those of wider society; the privacy of the individual against the free speech and informational interests of everyone else. The more post-mortem privacy we grant, for instance, a right to be forgotten, the more constrained the survivors are in knowing, discussing and judging that person.[2] Or so it seems. This paper aims to develop a different perspective that complements the existing work on post-mortem privacy protection. We argue that the right mix of legal provisions and technological tools to preserve the privacy interests of the deceased can lead to more, not less, intergenerational data-sharing and transmission. In the remainder of the introductory section, we make a prima facie argument from historical examples of "intergenerational under-sharing of data". In addition to adducing some evidence for the key contention of this paper, it also helps to contextualise the current discussion further. How we constantly generate digital information about us – information that also tends to be "sticky" and difficult to erase once put into the open – has led to the recent interest in post-mortem privacy. However, our discussion of how historical changes in communication media created similar anxieties for the Victorians will show that some of these problems transcend narrow technological developments. Contextualising contemporary discussions on technology regulation in much longer historical trajectories can also help discern what is new and technology-specific in the current debate and what is simply a recurrence of an old problem in new garb.

We then draw in the next section on findings from psychology and sociology to identify some of the underlying and unchanging human interests and motivations at the heart of the issue. We also discuss how inheritance law has always had roles other than the mere distribution of economic assets. Rather, it served and still serves as a vehicle for memory curation. This function of memory curation allows us to see the problems as a question of intergenerational equity and power asymmetry, which opens up the conceptual space for new regulatory and technological solutions. It also allows us to draw on an extended analogy to problems of intergenerational equity in environmental law.

This discussion will also show some of the inherent limitations of purely legal solutions. In the concluding part we introduce ideas and findings from an EPSRC-funded project on "cumulative data disclosure", arguing that with the right type of legal adjustment, the tools that we hope will lead to safer self-disclosure and communication in online environments during life can also assist in the more efficient management of data in the event of death.

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[1] See e.g. Ponterotto, J.G., 2015. In pursuit of William James's McLean Hospital records: An inherent conflict between postmortem privacy rights and advancing psychological science. Review of General Psychology, 19(1), pp.96-105; Buitelaar, J.C., 2017. Post-mortem privacy and informational self-determination. Ethics and Information Technology, 19(2), pp.129-142; Tubaite-Stalauskiene, A., 2018. Data Protection Post-Mortem. International Comparative Jurisprudence, 4, p.97 - 104

[2] For a discussion on the relation between the RTBF and postmortem privacy see Gamba, F., 2020. The Right to be Forgotten and Paradoxical Visibility. Privacy, Post-privacy and Post-mortem Privacy in the Digital Era. Problemi dell'informazione, 45(2), pp.201-220.

2. “Private letters of public men”.

Changes in the business model of postal services in the first half of the 19th century profoundly changed how educated Victorians communicated. A state monopoly that guaranteed safe, cheap and most importantly, simple-to-use delivery of mail uniformly across the whole of the UK, together with improved general education standards, made letter writing a new national past-time. The Scottish economist John Ramsey McCulloch argued in 1831 that "nothing contributes more to facilitate commerce than the safe, speedy and cheap conveyance of letters", connecting reform of the postal system also to the other technological disruption of the age, the steam engine.[3] But while the use for commercial purposes was a significant driver behind the reform, the exchange of personal information enticed and worried the Victorians. Not only did the number of letters double within a year of the 1840 reform, but with the costs of sending letters decoupled from the number of pages sent, they also became longer and more detailed.[4]

While the Victorians (and their continental counterparts) thus embraced the new system enthusiastically, some of its implications also profoundly worried them. This included concerns about privacy from the beginning. We thus find across the world the emergence of laws guaranteeing the “confidentiality of letters coinciding with increased use of postal services through a more educated populace, facilitated by technological and organisational reform. Earlier laws had mainly targeted aberrant or corrupt postal workers – so already the *Allgemeinen preußischen Postordnung* of 1712 threatened postal clerks with dismissal and criminal prosecution for opening letters, or the decree of Louis XV from 1742 that imposed the death penalty for violating the secrecy of letters. Soon though, the danger of government interception of letters also entered the regulatory space. In pre-revolutionary France, confidentiality of letters had been requested in the Cahiers de doléances”. It became a contested aspect of the emerging civil rights debate. However, it ultimately did not find its way into the Declaration of the Rights of Man and Citizen or the French Constitution of 1793.[5] The 4th Amendment of the US constitution would eventually ensure that U.S. mail in transit had the same level of protection as that kept by the sender in his home.[6] The early 19th century saw this provision adopted in constitutions across a large number of modern nation-states, from Portugal in 1826 to Article 141 of the aborted Paulskirche constitution of 1849 in Germany that provided that: “The secrecy of correspondence is guaranteed. The limitations necessary in criminal investigations and cases of war are to be determined by legislation”.[7]

While the public debate surrounding these and similar legislative initiatives kept the concern about privacy and letters in the public eye, they only dealt with dangers created by the state, be it through corrupt employees or intrusive police officers and prosecutors. However, the fear of disclosing too much personal information to private parties was of equal concern. Letters were sent now more often, but still not lightly, and as a consequence, regularly treasured, kept and archived by the recipient. This development was to delight modern-day historians for whom these became an important source through which to study the life of

[3] McCulloch, J.R, 1831, A Treatise on the Principles, Practice, and History of Commerce. R. Baldwin, London.
[4] Daunton, M.J. 2015, Royal Mail: The post office since 1840. Bloomsbury Publishing Chap 2
[5] Carter, K.M., 2018. The Comités des Recherches: Procedural Secrecy and the Origins of Revolutionary Surveillance. *French History*, *32*(1), pp.45-65.
[6] Ex parte Jackson, 96 U.S. 727, 732-733, 735 (1878)
[7] Bode, T.A., 2012. Verdeckte strafprozessuale Ermittlungsmaßnahmen, Springer, Berlin, Heidelberg. pp. 17-23.

ordinary people and their everyday experience.[8] It was, however, just that posthumous use of letters (and also diaries) that concerned the Victorians.

James Boswell's The Life of Samuel Johnson, published in 1791, heralded the emergence of a new genre of writing, the modern biography. Based on an unprecedented amount of further research including archival study, eye-witness accounts and interviews, it also opened up the private life of Johnson to a wider public.[9] While friendly and empathetic to its subject, it was also an honest account of Johnson's life and character, not a hagiography. Changes in publishing technology and publishing business models, together with rising levels of literacy, furthermore introduced these biographies to a larger audience through affordable paperbacks, or as a serialisation in periodicals.[10]

Literary biography, in particular, began to emerge by the 1850s, also buoyed by the emergence of the "celebrity artist" and catering for a fanbase.[11] While many authors welcomed their new status and, through the increasingly popular autobiographical writings, tried to shape the way their public perceived them, others worried about prying eyes. W.H. Auden famously referred to biographers as 'gossip-writers and voyeurs calling themselves scholars' and declared emphatically that a writer's private life 'is, or should be, of no concern to anybody except himself, his family and his friends'.[12]

Nineteenth-century letter writers thus faced a dilemma: engaging in extensive private communication had become a social norm, as had the tendency for the recipient of letters to keep these. At the same time, they could vividly see how this correspondence could find its way into public accounts of their private lives, if not now, then after their death. Part of the response was what we today would call privacy-enhancing tools, and what the Victorians called a good fire in the hearth: while many continued to keep their letters, others became as enthusiastic about burning (some) letters as they were about writing them. So common did this become that it also found its way into contemporary literature. Wilkie Collins used the burning of letters (or their discovery, amiss of burning) as a frequent plot device. Between 1854 and 1855, protagonists in three of his stories recommend burning papers and letters.

It is against this historical context that we encounter the case of Charles Dickens and his attempt to prevent sensitive information about his private life from becoming the fodder of scandalous biographies after his death.

In 1860, in what Paul Lewis described as "probably the most valuable bonfire on record",[13] Charles Dickens burnt thousands of letters and notes that he had accumulated over more than

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[8] A good example is Halldórsdóttir, E.H., 2007. Fragments of Lives—The Use of Private Letters in Historical Research. Nordic Journal of Women's Studies, 15(1), pp.35-49 or Maxwell, J., 2016. The personal letter as a source for the history of women in Ireland, 1750-1830 (Doctoral dissertation, University of Dublin). http://www.tara.tcd.ie/bitstream/handle/2262/83144/Maxwell,%20Jane_%20thesis.pdf?sequence=1

[9] Wheeler, D., 2014. Domestick Privacies: Samuel Johnson and the Art of Biography. University Press of Kentucky.

[10] See e.g. Casper, S.E., 1999. Constructing American lives: biography & culture in nineteenth-century America. UNC Press Books.

[11] Eltis, S., 2005. Private lives and public spaces: reputation, celebrity and the late Victorian actress. In *Theatre and Celebrity in Britain, 1660–2000* (pp. 169-188). Palgrave Macmillan, London.

[12] Cited from Yorke, C., 1990. Biography and integrity. Bulletin of the Anna Freud Centre, 13(1), pp.59-64 at 59

[13] Lewis, P., 2004. Burning: The Evidence. *The Dickensian*, *100*(464), p.197.

twenty years. His children helped him, bringing basket after basket stuffed with correspondence, even when they were arguing with him to keep some of it.

About this event, he wrote to William Henry Wills (who thankfully did not, in turn, burn the letter, though Dickens had also asked relatives to destroy communication they had received from him):

"Yesterday I burnt, in the field at Gad's Hill, the accumulated letters and papers of twenty years. They sent up a smoke like the Genie when he got out of the casket on the seashore, and as it was an exquisite day when I began, and rained very heavily when I finished. I suspect my correspondence of having overcast the face of the Heavens."

A few months later, Dickens wrote to William Charles Macready: "Daily seeing improper uses made of confidential letters in the addressing of them to a public audience that have no business with them, I made not long ago a great fire in my field at Gad's Hill, and burnt every letter I possessed. And now I always destroy every letter I receive not on absolute business, and my mind is so far at ease."

The letters he burned had been letters sent to him. On those written by him, he declared: "Would to God every letter I had ever written was on that pile."

However, his expressed wishes did not sway even some of his closest friends and family. A decade after his death, his daughter Mary and his housekeeper and sister-in-law Georgina Hogarth published a two-volume edition of his letters “supplying”, so the editors indicated, a want which has been universally felt”.

What was the reason behind the bonfire of letters, apart from a general distaste for having his correspondence scrutinised after his death? From a letter to the Dean of Rochester who, writing a biography of the artist John Leech, had asked him for a piece of Leech’s correspondence with Dickens, Leech wrote:

‘There is not in my possession one single note of his writing. A year or two ago, shocked by the misuse of private letters of public men, which I constantly observed, I destroyed a very large and very rare mass of correspondence. It was not done without pain, you may believe, but, the first reluctance, conquered, I have steadily abided by my determination to keep no letters by me, and to consign all such papers to the fire.’

The "misuse of private letters of public men", observable as we argued also in the buoying biography industry, were a general concern. But Dickens’ worries may have been more specific. In 1858, and during his acrimonious separation from his wife, he briefly touched upon the issue of his domestic difficulties in a letter to an associate.

The letter contained the following section:

“Two wicked persons, who should have spoken very differently of me, in consideration of earnest respect and gratitude, have (as I am told, and indeed, to my personal knowledge) coupled with this separation the name of a young lady for whom I have a great attachment and regard. I will not repeat her name–I honor it too much. Upon my soul and honour, there is not on this earth a more virtuous and spotless creature than that young lady. I know her to be innocent and pure and as good as my own dear daughters.”

If Dickens had hoped to quell speculations about a "third party" involved in his divorce, it badly misfired. In August 1858, the letter was published (under unclear circumstances) in the New York Tribune and then quickly picked up by newspapers in the UK. In anticipation of the Streisand effect[14], far from quelling any speculation, it told people for the first time that something was happening worth speculating about. Or, as another newspaper at the time put it:[15]

"out of the thirty millions of people in these islands, till he himself gave rumour her wings, there were not thirty individuals who knew anything of the matter."

But for the letter, the women in question may have stayed "invisible"[16]. This way, several names were publicly discussed, and Nelly Ternan was identified by name a few years after Dickens'death. Crucially though, at the time when he was burning his correspondence, he could still hope that by destroying all of his correspondence, he would also destroy any hints or traces of her name, and so preventing the very thing that eventually did happen – to have her identified as a homewrecker after Dickens' death. There was, so we stipulate, no smoking gun, not a specific indiscreet letter that could have been destroyed easily. Rather, the fear must have been that small trifles and breadcrumbs, spread across the correspondence, could have enabled the re-identification of the "virtuous and spotless creature". This fear led him to destroy all of his correspondence, despite the pain he said this caused him.

We can now draw several points from the above together to formulate a key argument for this paper. Post-mortem privacy is often seen as dependent on the question of whether the dead have some dignity rights or whether, in the words of Stephen J, "The Dead have no rights and can suffer no wrongs".[17] This inevitably leads to complex philosophical discussions about the ontological status of the dead.[18] A somewhat less problematic view attributes the relevant interests to the living. As we will see in more detail in the next section, we care about how other people will talk and think about us even after we are dead, and giving us reassurances *now* that our legacy and reputation will be protected increases our quality of life, now. Some aspects of our inheritance law can only be understood if we take this intuition seriously. But even this view pitches privacy interests against societal interests in a zero-sum game. A right to privacy protects us in our seclusion (privacy as the right to be left alone) and as a result constrains the rights of others to access information and to discuss and talk about us. This atomistic and individualistic conception of privacy as a defensive wall we can build around us had historically dominated the discussion on privacy more generally, equating ultimately privacy with loneliness.[19]

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[14] The term was coined by Masnick in Masnick, M. (2005, January 5). Since when is it illegal to just mention a trademark online? Techdirt. http://www.techdirt.com/articles/20050105/0132239.shtml For a discussion see Jansen, S.C. and Martin, B., 2015. The Streisand Effect and Censorship Backfire. International Journal of Communication, 9, 656-671.

[15] Cited from Leary, P., 1850. How the Dickens Scandal Went Viral. Charles Dickens and the Mid-Victorian Press, 1850–1870, pp.305-25. At 312

[16] Tomalin, C., 1991. The invisible woman: the story of Nelly Ternan and Charles Dickens. Penguin UK.

[17] R. v. Ensor, 1887. 3 Times L.R. 366.

[18] See e.g. Winter, S., 2010. Against posthumous rights. Journal of Applied Philosophy, 27(2), pp.186-199; Belliotti, R.A., 2011. *Posthumous harm: Why the dead are still vulnerable*. Rowman & Littlefield. Boonin, D., 2019. Dead Wrong: The Ethics of Posthumous Harm. Oxford University Press; Schwartz, M., 2012. The Dead as Stakeholders. In Applied Ethics: Remembering Patrick Primeaux. Emerald Group Publishing Limited.

[19] Heffernan, W.C., 2016. From Thoughts and Beliefs to Emotions and Sensations: Brandeis on the Right to Be Let Alone. In Privacy and the American Constitution (pp. 145-165). Palgrave Macmillan, Cham.

More recently, an alternative discourse in human rights scholarship has emerged, which sees privacy as a social or public value on which other important public goods, in particular democracy and public participation, rest. Simitis argued forcefully that even tough privacy has often been misunderstood as conflicting with transparency, free speech and other democracy enhancing concepts, its role in fostering participation must not be overlooked.[20] This interdependency between the protection of privacy and the protection of sociability is also highlighted by Raab (2011) who argues that values like personal autonomy and self-determination

"are important not primarily because individuals may wish to live in isolation (for they do not, mostly), but so that they can participate in social and political relationships at various levels of scale, and so that they can undertake projects and pursue their own goals".[21]

Privacy laws then do not (just or mainly) prevent sharing of information, on the contrary, they provide the institutional structures within which meaningful sharing is possible. Arguably, when applied to the deceased, this rationale seems to fail, but as the example of Dickens' letters shows, this is far from the case. As noted above, Paul Lewis described the burning of the letters as "probably the most valuable bonfire on record". The correspondence contained letters from Wilkie Collins, Thackeray, Tennyson, and Carlyle. Some came from street prostitutes, some from Queen Victoria. Had they been preserved, they could have enriched tremendously not just our appreciation of Dickens the author, but would have given us a kaleidoscopical view of Victorian society. Had he been confident enough that they would be used properly after his death, had there been legal mechanisms capable of giving that assurance, we might all be richer now. Conversely, had he been able to quickly identify those and only those letters that posed a real danger to the anonymity of his lover, he may have refrained from their wholesale destruction. Better protection of his post-mortem reputation, either way, would have given later generations more, not less, to know about him than we eventually got. The consequence of a lack of robust and trustworthy post-mortem privacy, then, is not unfettered access to a deceased's private information, rather it is a world where the 'intergenerational data transfer' is hampered, as its presence is an incentive to destroy information rather than to pass it on.

As we will see, there are limits to the capability of law alone to create such a trusted and trustworthy transfer. Inevitably, at the point of our death, information that we would have preferred to keep isolated and separate comes together in the hand of one person or institution, the administrator of the estate or the community of heirs. Dickens may have been happy to destroy only those letters that came from Nelly Ternan personally, and content to leave intact letters that merely mentioned her. However, this would have required that information remained distributed across the letters. Only in this way, the connection to his failing marriage would have remained hidden because no single person could have connected all the dots. But death is under our current system the ultimate "context collapse"[22], when the different identities we carefully build for different audiences come together in the hand of the

[20] Simitis, S., 1987. Reviewing privacy in an information society. *University of Pennsylvania law review*, *135*(3), pp.707-746.
[21] Raab, C.D., 2012. Privacy, social values and the public interest. Privacy, Social Values and the Public Interest', Politische Vierteljahresschrift, 46, pp. 129–152.
[22] The concept of context collapse originates in Meyrowitz, Joshua. No sense of place: The impact of electronic media on social behavior. Oxford University Press, 1986. It was applied to social media first by Marwick, A.E. and boyd, D., 2011. I tweet honestly, I tweet passionately: Twitter users, context collapse, and the imagined audience. *New media & society*, *13*(1), pp.114-133.; Davis, Jenny L., and Nathan Jurgenson. "Context collapse: Theorizing context collusions and collisions." Information, communication & society 17, no. 4 (2014): 476-485.

person who gets the passwords to our emails, social media and computer files. Context collapse describes the problem that we talk in different ways to different audiences, and present different images of ourselves to them. On the Internet, the boundaries between these contexts becomes fragile, enabling attackers to connect these different and discrete digital personae. The use of pseudonyms and aliases normally provides some protection, but even the most carefully curated multiple identities will eventually become accessible and connectable after death, when a single administrator of the estate gains access to all the accounts of the deceased.

The next section explores in more depth the role and limits of law to enable intergenerational data transfer, to show how the law tries to enable us to control within reason, the discourse about us "beyond the grave", while at the same time enabling us to pass on rather than destroy what we possess.

3. Wills and testaments as identity preservation tools

Humans care deeply about how they will be remembered, and often hope that the next generation will continue on a path they have set for them. This desire is, however, also particularly precarious. We can exercise power, and indeed violence, against future generations by using up resources and destroying habitats so that their scope for living a good life according to their values is seriously limited. We refrain from doing so also because of the way we want to be remembered. Our ability to use resources or to destroy assets and in this way put them out of bounds for future generations is at least to a degree countermanded by the ability of future generations to depart from the path we planned for them, or to revisit the way they remember us. This fragility of the image we want to project beyond the grave leads to a desire to exercise control and "bind" the future to our wishes. This desire is deeply rooted in the human psyche, a phenomenon that can be found across cultures and across times.[23] Also cross-culturally, is the conviction that the most promising way of achieving immortality is through the memories that we create in others. David Unruh described this process as one of "identity preservation":[24]

> "Dying people hope they will be remembered as good fathers, competent women, successful businessmen, creative artists, or peacemakers. Survivors are left with bundles of images, materials, objects, and wishes of the deceased. Their task is to make sense of this amalgam and selectively preserve certain properties of the deceased. […]. The dead may be remembered as loving, obnoxious, volatile, or scornful, whether or not they viewed themselves as such while alive. However fact that survivors focus on personal identity implies that the deceased held certain images themselves while alive which others accepted. In this context, what is being preserved after death is a self-concept which existed during life, was acknowledged by others, and had become a significant aspect of the dead person."

For Dickens, this also meant a desire to be remembered as the person who embodied the ethical convictions of his literary creations, a normative consistency between the author and his work. An affair with a woman considerably younger than him, without realistic prospect of marriage, would not just have destroyed his reputation as a person. Through the type of biographical criticism that began to emerge at his time, it could have threatened the way in

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[23] See. E.g. H. Dermot McDonald, "Idea of Immortality," Vox Evangelica 7 (1971): 17-38.
[24] DR Unruh, "Death and Personal History: Strategies of Identity Preservation" (1983) 30 Social Problems 340-351

which his oeuvre too was perceived; hypocritical and dishonest rather than advocating generosity, kindness and loyalty.

Kings, presidents and other people of power can achieve identity preservation by carefully curating their legacy while alive, through monuments, statutes and commissioned eulogies. Examples range from Augustus Res Gestae and his record of deeds that he instructed the Senate to put on public display after his funeral, to Winston Churchill's dictum that "History will be kind to me for I intend to write it."

What powerful people do on a large scale is, however, just an amplification of behaviour we all engage in. Before we die, we try to create cues that preserve our identity in the minds of the survivors.[25] The survivor is left with images, materials, and wishes of the deceased that enable, or force, them to act upon information and behaviours that were part of the deceased when he or she were alive.[26] This ability to influence others to act the way we want them to, even if we are not still around, creates a bond between the creation of memory and the exercise of control beyond the grave. On the one hand, by creating memories and images in the survivors we can induce people in the future to act in certain ways. On the other, what we make them do can shape how we will be remembered, for instance through the actions of charities set up in our name.

In the past, physical objects and material culture played a central role in the process of memory curation, and allowed the living to have an ongoing relationship with the dead.[27] Hallam and Hocket describe the inevitable ambiguity in this process. Linking memories of the dead to material objects acts as a "bulwark against the terror of the forgettable self" while also producing an "*inescapable* aftermath", something we need and fear in equal measure.[28] For us, data objects replace more and more physical objects as constituents of post-mortem memory formation, but carry the same ambiguity. Just as we try to exercise power over the actions of future generations when we are gone, future generations can exercise a corresponding power by refusing to remember us the way we would want to be, maligning our deeds or even expunging us from the records altogether. *Yemach shemo vezichro* - "obliterate his name and his memory" is one of the strongest curses in the Hebrew language[29], and shows how powerful a threat of "non-remembrance" can be.

Law takes these intuitive, universal and efficient strategies and structures, amplifies and channels them. Inheritance law allows us to enforce, to a degree, our intentions and interests through third parties after we are dead. But this power is inevitably precarious. When Augustus dictated his Res Gestae, he had to do this in the knowledge that his successors might not only refuse to act on his orders but go further, and erase his memory through legal edict, a damnatio memoriae, from the records altogether. We will come back to the power of memory erasure below, but will discuss first the way inheritance laws across the ages try to balance the freedom to act of the current generation with the wishes, plans and intentions that survive in the memory of the dead.

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[25] R Butler, "Looking Forward to What? The Life Review, Legacy and Excessive Identity versus Change" (1970) 14 American Behavioural Scientist 121-128

[26] DR Unruh, "Death and Personal History: Strategies of Identity Preservation" (1983) 30 Social Problems 340-351

[27] See in particular Hallam, E. and Hockey, J., 2020. Death, memory and material culture. Routledge.

[28] Op cit p. 4

[29] so C Bermant, *The walled garden: the saga of Jewish family life and tradition*, Weidenfeld and Nicolson p. 250

While most of us realise that we cannot take our wealth with us, many of us hope nevertheless to control at least in part how our financial assets are used when we are no longer around.[30] This too is part and parcel of Unruth's identity preservation strategy, especially if a will apportions and dispenses objects that the testator had imbued with personal identities and feelings about themselves. Testaments in this view, also become part of a selective communication to survivors, instructing them which identities should be remembered, and also to a degree the content of those memories. This is particularly the case when specifically named artefacts are passed on, and also when they deviate from the normal default patterns. Inheriting these special objects brings with it obligations and commitments, a duty of stewardship:

> "To receive grandmother's pearl brooch or grandfather's favorite shotgun may make emotionally mandatory compliance with other stipulations or expectations. One obligation may be the survivor's desire to preserve and protect specific memories or images of the deceased – that is, to become a guardian of the deceased's persona."[31]

From this we take that testaments are not merely a means for the economic redistribution of wealth, something that settles potential conflicts between the living. Rather, they are also a vehicle to create and maintain a new abstract object, the disembodied identity of the deceased, which prolongs and builds upon the sense of self-identity of the testator while s/he was alive. The distribution of artefacts in a testament does not so much bring the identity of the testator to a final conclusion, the shattering of what was theirs among their heirs, but sustains the prolonged existence of an "informational object" in the form of distributed memory instances of the deceased.

Once a prerogative for the powerful and wealthy whose testaments could shape the fate of entire nations – as Caesar's famously did – the testament's historical roots in the West can be traced back to the law reforms of Solon. Testaments became a more common tool for the disposal of assets in Roman law. Roman law also gave us the mechanisms through which the desires and intentions of the deceased could be acted upon. Legates and fideicommissa were institutions that allowed the testator to put their trust in the execution of their will into people acting in a rule-governed, institutional environment. It determined not just who should inherit, but also created an enforceable means for controlling how assets were to be used. The testator would nominate one of the heirs to act as fiduciary, who was then entrusted to distribute the assets to other beneficiaries as described in the fideicommisarius. In the context of digital assets, we can think of a data trust performing a similar function, preserving, curating and eventually distributing information as determined by the deceased.[32] However, where it comes to the literary and biographical estate of artists, we see from a string of historical precedents just how fragile the element of "trust" here is, for who will act on behalf of the deceased when the emerging consensus is that public interest in their work outweighs any concerns they may have had? Dickens, as we noted above, had made his feeling about publishing his letters clear, yet his daughters, as trustees of the estate, considered the "want" of his fans as greater. Franz Kafka had instructed Max Brod, his literary executor, to destroy any unfinished manuscripts on his death, unread. Brod, however, decided that Kafka's

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[30] See e.g. J Rosenfeld, "Old Age, New Beneficiaries: Kinship, Friendship and (Dis)inheritance" (1980) 64 Sociology and Social Research 86-95.

[31] Unruh op.cit p. 344

[32] So e.g. Edwards, L. and Harbinja, E., 2020. 'Be Right Back': What Rights Do We Have over Post-mortem Avatars of Ourselves?. Future Law: Emerging Technology, Regulation and Ethics, p.262.

writings were too important to put them to the flame, and as a result *The Trial*, *The Castle* and *Amerika* were preserved for posterity.

Was he right in doing so? For the Romans a key function of the fideicommisarius was to facilitate the preservation of wealth within the family line – important also because with the dissolution of a family, its *penates*, the household deities, would perish. Faithful execution of a will therefore was more than being "faithful to the deceased", it served to generate and maintain three different abstract objects: the self of the deceased as a memory artefact, the family of which they were part, and the "lares et penates" whose existence depends on the continuation of the family and which mediates between the dead and the living. Both Roman law from a legal perspective, and Unruth's analysis from a scientific one, show that post mortem identities are not self-sufficient and complete objects, but are constantly changed and recreated in communication between the living.

Wills gave power to the testator in Roman law. But this was balanced, at least for the powerful, by the *abolitio nominis*, or in more modern terminology *damnatio memoriae*, a measure the Roman Senate could take against the memory of a deceased politician or emperor. His name would be erased from all annals, all portraits and inscriptions of his were destroyed, and in the future mentioning his name publicly was discouraged, though in Roman times not legally prohibited. The Emperors Caligula, Nero, Domitian, Commodus, Geta, Elagabal and Maximinus Thrax were punished this way.[33] That we still know their names, and indeed that they had been subject to *damnatio*, indicates a fundamental paradox: Achieving collective forgetfulness was difficult even in Roman times, and rather than fully erasing their names from history, the order of *damnatio* created another reason to remember them, and sometimes created even a new and enduring set of documents to that effect.[34] Indeed, it has been argued that some of the erasure was intentionally left incomplete, enough for everyone to see that a name had been chiselled away, but with enough left to indicate who had been named, to act as are reminder of the punishment against them. This "remembrance of forgetting"[35] is also what we encountered in Dickens' failed attempt to have society forget about Nelly. The memory of his (attempted) forced forgetting endures even today, precisely because he left a riddle that invites revisits to the events.[36]

As noted above, within the data privacy discourse, this phenomenon is sometimes associated with the name of Barbara Streisand and the eponymous Streisand effect. Similarly, Mario Costeja González may have ensured the right to demand from Google that the record of his bankruptcy was delinked, but having set an important precedent, his name will survive in the court reports and law textbooks decades after any interest in his past dealings will have

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[33] For a comprehensive discussion see Varner, E.R., (2004) Monumenta Graeca et Romana: Mutilation and transformation: damnatio memoriae and Roman imperial portraiture. Bril; see also Whitling, F., 2010. Damnatio memoriae and the power of remembrance. in Pakier, M. and Stråth, B. eds., 2012. A European memory?: Contested histories and politics of remembrance (Vol. 6). Berghahn Books..

[34] The edict implementing the damnatio of Geta has been preserved on papyrus, Papyrus HGV BGU Xi 2056 http://aquila.zaw.uni-heidelberg.de/hgv/16911

[35] C Hedrick: History and Silence. Purge and Rehabilitation in Late Antiquity. University of Texas Press, Austin 2000

[36] Examples for the enduring fascination with the event include Timko, M., 2010, The untold story of Mrs. Charles Dickens, World and I, vol. 25, no. 12, Gale Academic OneFile; link.gale.com/apps/doc/A245953270/AONE?u=ed_itw&sid=googleScholar&xid=f7b6d771. Accessed 27 Feb. 2022; Tomalin, C., 1991. The invisible woman: the story of Nelly Ternan and Charles Dickens. Penguin UK; Nisbet, A., 2020. Dickens and Ellen Ternan. University of California Press; Ruck, B., 2014. Ellen Ternan and Charles Dickens: A Re-evaluation of the 'Evidence'. The Dickensian, 110(493), p.118.

died.[37] Here we see a limit of wills and testaments to exercise the type of control over our memory objects that allows us to protect the reputation of people we care about. It is of course possible to use the will to instruct our heirs to first erase the browser history on our computer, or to delete specific files on the hard drive. A will, however, creates a public record. Should it get litigated, this too will become a subject of public records, especially in countries like the US where open and unredacted access to all court documents is a constitutional right.

Summarising the main ideas from this section, we conclude that inheritance is not just the passing of wealth, it is the dynamic creation of memory objects. While the law can create institutions that can protect these memory objects, and in this way also assist intergenerational "memory transfer", on its own it still exposes the living to considerable risk. Given how lawyers are frequently depicted in his books, it is uncertain if Dickens would have trusted the reputation of a woman he felt responsible for to one of them, or indeed if he would have been satisfied even had he been certain that nobody but this lawyer knew the identity of his love interest. Some secrets we may prefer to share with nobody, and to take them literally to the grave.

In the final section, we will therefore look at technological tools that could supplement legal solutions.

4. Towards technologies for curating cumulative data disclosure.

"Data cleaning services" are already a commercial possibility to replicate digitally what Dickens performed with fire. Everplans for instance promises to "To Eliminate All The Skeletons In Your Closet After You Die":

"Questionable browser history, racy photographs, and private health conditions are just a few posthumous scandals you might want to avoid. What secrets do you want to take to the grave" [38]

Their "Cleaner" isn't, as they admit, a legally recognised title like an "executor" would be (and therefore also less committed to public procedures and accountability). Yet they are someone the customer has to trust "with extremely sensitive information." Apart from this risk, usage of such a service in situations similar to those of Dickens creates another paradox: While Everplans offers a DIES (Dangerous, Illegal, Embarrassing, Secret) chart of information one may want to see deleted rather than fall into the hands of one's heirs, the more targeted the deletion is, and as a result the more data for the relatives remains, the more the customer has to disclose to Everplan about their most embarrassing secrets. For Dickens, this would have been unacceptable in the light of the above discussion. This means ideally, we need a tool that allows one to trace information across multiple letters, or in the modern case across multiple sites and apps, to then allow it to automatically delete upon death those, and only those data that could put the reputation of the owner, or third parties they care about, at risk.

[37] For an example, and the background of the case, see Lynskey, O., 2015. Control over Personal Data in a Digital Age: Google S pain v AEPD and Mario Costeja Gonzalez. *The Modern Law Review*, *78*(3), pp.522-534.
[38] "https://www.everplans.com/articles/how-to-eliminate-all-the-skeletons-in-your-closet-after-you-die

As we noted above, the problem that Dickens was facing was the risk that very small pieces of information spread across multiple letters, notes or diary entries could, if taken together, enable the de-anonymisation of Ellen Ternan.

This could be through a purely quantitative accumulation of information, for instance a clear pattern of letters from friends to Dickens, all commenting in different ways on the female companion they had seen him with. While one or two encounters of that type may have been within the bounds of Victorian morality, a significant number of in themselves harmless events such as a concert visit or attendance at a gallery opening would indicate an amount of time spend together that makes her a candidate for "the other woman".

A different type of cumulative risk is more qualitative in nature, enabling dots to be connected between otherwise unrelated "breadcrumbs". This could be for instance a letter from a jeweller asking where to place the initial "E T" on a bracelet,[39] another from a friend commenting on how captivated Dickens seemed to have been during a recent visit to the performance of *The Frozen Deep*, a third that comments more generally about the looks and ability of a rising star at the theatre, a Ms Ellen Ternan and finally, a third letter that relays the amusing story of how two actresses almost came to fight over a bracelet on the opening night of *The Frozen Deep*, when the diva Elanor Trimble thought she had received an expensive bracelet as a gift from an admirer, only to realise it was intended for her understudy with the same initials. None of the letters in themselves is problematic, but taken together they would enable Ternan to be identified as the object of Dickens' attention.

This is similar to the type of risk scenario that the EPSRC-supported project on Cumulative Data Disclosure aimed to address. In 2022, Dickens would not have had a pile of physical letters to burn, but instead he would have had a plethora of digital communications spread across different devices, platforms and services. The challenge however is the same: rather than destroying everything in the hope of capturing the truly problematic bits of information, planning for one's digital legacies, in a way that respects intergenerational equity, requires a selective approach that leads to targeted data deletion.

Digital traces comprise trails of data generated through one's everyday online interactions. These include through intentional information sharing, through to information shared by others, to automated application functions such as social media metadata that exposes one's location when posting an update. One's traces are continually added to, and as they are situated and received by others in ever shifting regulatory, social, cultural and political contexts, they comprise data that are 'lively' in their dynamic potential for generating new meanings, including through new associations with existing data.[40] Data's liveliness then, can confront people with "information about themselves which is not only continually generated but is also used by other actors and agencies in ways of which they may not be fully aware".[41]

Online experiences are polymedic, in that they usually involve interactions with platforms that connect multiple digital devices, networks and modes of media.[42] One must "continually

[39] Based loosely on the way the scandal broke, see Slater, M., 2012. The Great Charles Dickens Scandal. Yale University Press p. 118 ff
[40] Lupton, D., 2016. Personal data practices in the age of lively data. Digital sociologies, 2016, pp.335-350.
[41] Ibid.
[42] Madianou, M. and Miller, D., 2013. Polymedia: Towards a new theory of digital media in interpersonal communication. *International journal of cultural studies*, *16*(2), pp.169-187.

make situated decisions about the ways in which information and interaction might or should flow from site to site, service to service, and platform to platform''.[43] While some convergence between one's digital traces may be acceptable or even desirable, care is needed to coordinate and maintain their separation where necessary, especially when different social contexts might collide, including between public, private, personal and professional selves.[44] Digital traces' 'ongoingness' should be carefully managed, or "coped with [...] understood in research as a processual element of the everyday".[45] Meanwhile, one's data futures are uncertain with the ongoing potential for one's digital traces to "throw up surprises".[46]

As part of our project into the cumulative effects of data disclosure, we carried out a series of seminars with users of social media that allowed them to explore, and to re-think, their data practices. These workshops built on and were informed by a series of qualitative interviews that we carried out in 2020. Those interviews were conducted using a data narrative approach[47] to understand the risks, issues and consequences of the digital traces people leave online. The data narrative approach is intended to capture participants' descriptions of their data, device use, channels and networks of communication, data and information practices.

While a detailed discussion of the findings of these interviews are the subject of other papers,[48] [49]we note here that the overall pattern confirmed our hypothesis that the way people make decisions about data risks is heavily bounded. While many participants voiced concerns about their privacy, the type of stories they reported to illustrate their understanding of the risks overwhelmingly looked at isolated leakage of "high-risk items": the mother who disclosed the regiment and location of the advanced training of her son in the military, or the job interview that did not result in an offer because of the embarrassing photo shared on Facebook. However, once participants were asked to shift their perspective and think about how a third party might write a book about them, the temporal and cumulative effect of data disclosure became much more pronounced, though individual data pieces remained significant.

Building on these results, we conducted a follow-up workshop that took the idea of "writing a book about someone" as a starting point. Scotland's national poet, Robert Burns, expressed the idea in his Poem to a Louse: "*O wad some Power the giftie gie us To see oursels as ithers see us*"– if only we had the power to see ourselves as others see us.

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[43] Wolf, C.T., Ringland, K.E., Gao, I. and Dourish, P., 2018. Participating through data: Charting relational tensions in multiplatform data flows. *Proceedings of the ACM on Human-Computer Interaction*, *2*(CSCW), pp.1-17 p. 2

[44] Davis, J.L. and Jurgenson, N., 2014. Context collapse: Theorizing context collusions and collisions. *Information, communication & society*, *17*(4), pp.476-485.

[45] Pink, S., Lanzeni, D. and Horst, H., 2018. Data anxieties: Finding trust in everyday digital mess. *Big Data & Society*, *5*(1), p.1-14

[46] Ibid at 2

[47] Vertesi et all, Data {Narratives}: {Uncovering} tensions in personal data management. In Proceedings of the 19th ACM Conference on Computer-Supported Cooperative Work & Social Computing ({CSCW} '16). Association for Computing Machinery, San Francisco, California, pp 478–490. https://doi.org/10.1145/2818048.2820017

[48] Nash, C., Carey, D., Nicol, E., Htait, A., Schafer, B., Briggs, J., Moncur, W. and Azzopardi, L., 2022. Making sense of trifles: data narratives and cumulative data disclosure. Jusletter IT.

[49] Nicol, E., Briggs, J., Moncur, W., Htait, A., Carey, D., Azzopardi, L. and Schafer, B. 2022. Revealing Cumulative Risks in Online Personal Information: A Data Narrative Study. Proceedings of the ACM on Human-Computer Interaction, 6 (CSCW2). p. 323. ISSN 2573-0142

Echoing this idea, we created fictional profiles for a number of social media users. We created a number of digital traces for each of them, like a Twitter post, an image uploaded to Facebook, etc. Most, though not all, of these traces were intentionally "low risk", containing information that one could easily disclose unthinkingly about oneself. A typical example would be a photo posted on the Twitter account of a fictional "Alex Smith" and a map that traced the daily running routine from a wearable app.

The photo shows, not easily seen, the house number. The visibility of the shape of the key would also be sufficient to allow a copy to be made. The map then enables the location of the street. For each character, we created several similar items, including Facebook profiles that show their friends, data shared from their fitness apps etc. Our workshop participants were then asked to take on one of several "adversarial" roles – the potential employer, the insurance salesperson looking for a sale looking for a story, and the concerned friend who noticed changes in online behaviour.

A Miro board then allowed the participants to explore how much information they could glean about their target from combining these sources.

The participants enthusiastically embraced the scenarios and discovered hidden and exploitable connections we had not anticipated. In their reflective analysis after the activity, they also showed a heightened sensitivity towards the cumulative effect of data disclosure, indicating the pedagogical value of this type of activity for better data practices.
We then turned the activity into a data game, playable without our supervision. Just as the ecosphere is in danger from the cumulative release of toxins that remain in the environment for long periods, so is the health of the "infosphere" at risk from data traces that stay in the environment for much longer than their authors realise, which can combine with other traces to create synergetic hazards that are substantially more "toxic" than their constituent parts.

Once a character (here, Taylor), a scenario and a task (e.g. journalist looking for a story, a friend helping Taylor understand how their accounts have been hacked) are chosen, a visualisation of the digital traces is automatically generated that is ordered by categories[50].

Seeing the risk associated with cumulative data from "the other side" allows, we hope, safer data practices. Ultimately, we aim to use the same interface to enable users to generate their own profiles, compare them to those they studied "adversarially", and thus turn what was learned directly into action. Persistence of data, just as persistence of toxins in the environment, poses unique regulatory challenges. In this analogy, the "right to be forgotten" becomes a tool to "clean" the data ecosystem, but exercising this right requires the data subject to keep track of their interactions in much more systematic ways than is currently feasible. It requires a new way of thinking about risk. As this process is less intuitive and more cognitively demanding than "atomistic" risk assessment, it also requires intelligent tools as support that lower that burden.

For post-mortem privacy, this means that intergenerational trust has to be built on two pillars: a legal regime that puts some constraints on how information about the deceased can be used

[50] Azzopardi, L., Briggs, J., Duheric, M., Nash, C., Nicol, E., Moncur, W. and Schafer, B. 2022. Are Taylor's Posts Risky? Evaluating Cumulative Revelations in Online Personal Data: A persona-based tool for evaluating awareness of online risks and harms. In: SIGIR '22: Proceedings of the 45th International ACM SIGIR Conference on Research and Development in Information Retrieval. ACM, New York, US, pp. 3295-3299. ISBN 9781450387323

and technological tools that allow the deletion of targeted data traces for those that are too risky to be passed on even in the presence of legal protection. Taken together, they could turn Dickens' bonfire of letters into a more chirurgical procedure of email deletion, enabling identity preservation but still giving the future the scope to define and redefine the past.