

Googling “How to Be a Person?”

The Social and Personal Mortgages of Frictionless Information Retrieval

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Introduction

In 2025, I found myself beside a beautiful lake in the south of Portugal having an anxiety attack of sorts. I was wild camping on a self-imposed ‘No Phone Holiday’ and I was terrified that during the night our little camper van was going to roll down the hill, off a cliff and into the lake. So I got out the van and set to work enacting all the half remembered techniques I thought might make our situation less precarious. I turned the wheel so the wheels were perpendicular to the slope. I put the camper into 1st gear. I even put rocks under the wheels. However, a nagging feeling still remained in my anxious mind. I wanted to google ‘How to stop a car rolling down a hill?’ I craved the reassurance that the internet could provide me. I did eventually fall asleep that night without breaking the sanctity of my ‘No Phone Holiday’. However, the experience left me curious about my relationship to the Internet and the information¹ it so easily and eagerly proffers. Why did I yearn for the Internet’s seeming authority? Why was the Internet the place I sought information from in particular, rather than advice from a car savvy friend, my parents who taught me to drive or even a mechanic? Importantly, I wondered What parts of myself was I giving up in this relationship? Was there anything wrong with Googling everything and anything at all the times?

This essay is my attempt to both illustrate my discomfort, to look at the factors that may have contributed to my (and maybe others) predicament and a look at where we might be heading to in the near future.

Key to unpacking this will be the idea of ‘Social Mortgages’, a term I am borrowing and remixing from Physicist Ursula Franklin’s *The Real World of Technology*. During this series of lectures on technologies impact on our lives, Franklin employs the term to remind her audience, “While we should not forget that these prescriptive technologies are often exceedingly effective and efficient, they come with an enormous social mortgage” (1990, p.24). This ‘Social Mortgage’ could be articulated as ‘Social Harms’ or ‘the negative

¹The word “Information” in relation to wisdom, knowledge, and data is a contentious subject and has been greatly debated. If you want to read a critique about how these words collapsed into near synonyms, especially in relation to information theory, see Theodore Roszak’s *Cult of Information*. However, throughout this essay I will use the word “Information” to denote any piece of data (text, video, coordinate...), or passage of data (paragraph, snippet, data point...) that could be ostensibly pertinent to a particular situation. E.g. A recipe video for a Sachertorte cake, the nutrition information of the ingredients used and the YouTube comments debating the recipes authenticity.

impacts on the social sphere'. However, a reason why I prefer the term 'mortgage', is that a mortgage is side effect of an upfront benefit. Something that doesn't immediately harm us but accrues a balance of negative impacts over a long period of time. Like a deal with the devil. It conveys this idea of being secret or unmentioned, we talk about the benefit but not it's cost. Likewise, we often acquire new loans (new technologies) to pay off the debts we have accrued from old loans (existing technologies). A 'Social Mortgage' in other words is the slow build of toxins to an immediate upfront tonic when using technological systems, services, or artefacts.

I will also be expanding the term to encompass Personal Mortgages, as in the impacts 'Information Representation and Retrieval' (IRR) technologies have on cognitive and physiological selves. However, both the personal and social mortgages are often deeply interconnected, blurred at their borders and often inflaming of each other.

With this being said, Part 1 of this essay will trace an imperfect path through the 1900s looking at different ways information was collected, processed and importantly used. It will also inquire into the Western ideal of rationality and glorification of data as a source of knowledge. Ending with a discussion on how the use of information retrieval systems creates distance between the information retrievers (us), and the sources of information, and the mortgages this can carry.

In Part 2, I will continue our wander through information history, as I look at how the internet and Silicon Valley's design philosophy of 'frictionlessness' enabled faster and easier access to information, while also creating an explosion in new digitised user generated information sources. Along the way I will stop and look at how this new wealth of information and the corresponding tools of access can lead to a phenomenon known as 'Information Anxiety', which can carry paralysing effects.

Part 3 will then build on both the values and mortgages laid out previously by exploring the current and near future promises of the AI Age. Here I will suggest that AI both entrenches and builds on these mortgages, as it expands the types of queryable information, as well as ease of use. Key to this will be to examine what it means to be human when technologies ask us to embrace a new normal of transhumanism.

To conclude, I will articulate a plea to myself to embrace friction. To not just tolerate but thrive in a mess of unknowing and inefficacy. A demand to trust myself.

Part 1

In our technological society, technique is the totality of methods rationally arrived at and having absolute efficiency (for a given stage of development) in every field of human activity.

— Jacques Ellul, “The Technological Society”

It seems that a key value of Western thought is the pursuit of rational decision making, and that the truth value of concepts depends largely on “their having clear and concrete material reference” (Marvin, 1987, p.50). Historian Carolyn Marvin, believes that all the 1980s optimism surrounding ‘The Information Age’ was just a reflection of The West’s deeply held belief that the availability of information is a key instrument for creating both “long-term social progress toward equal justice and prosperity,” and surmounting “short-term... individual inequities of social and material status.” (p.49)

Before what we now call ‘The Information Age’, one articulation of these values was statistics, a science initially tied to census taking and government decision making. In a story described by philosopher Wolfgang Ithamer (1987), an English Statesman working near Kabul in 1848 reached out to the Kadi of Mosul to acquire statistical data pertaining to Mosul, and its history. The Kadi Replied:

Oh, my famous friend, pleasure to those who live! Your demands are as useless as they are harmful. I have spent all my days in this country but never have I wondered about counting the houses or their inhabitants; and now you want to know just how many goods one may pack up on a mule or stow away in a barque. As a matter of fact, this doesn’t concern me. (p.64)

This answer was then used by Franz Reuleaux, a German university professor, to illustrate ‘the difference between developing and stagnating societies’ (Pitcher, 1987).

This trust in data and numbers, validated through statistical methods, as being the most objective way of seeing the world and codifying knowledge, can still be seen in the scientific methods such as empirical research. Maybe as a result of Foucaultian discipline at school, I for one, have embodied this reverence of ‘trusting the numbers’². When 18, I was at my Swiss

²Or trusting others have ‘run the numbers’.

grandmothers for Christmas having fondue. The conversation turned to whether one should drink white wine or tea with the melted cheese dish, a contentious regional argument amongst fondue enjoyers (My family were firmly ‘Team Wine’). I, at this point, was very much a techno-optimist, a young product designer convinced that innovation, and rational problem solving could fix the worlds woes. I confidently brought up a research paper, that concluded tea was much better for digestion and alcohol was a major cause of the dreaded ‘cheese baby’ (Heinrich et al., 2010). Everyone dismissed my statement, saying wine was obviously best in their experience.

And it’s hard not to fall back to these information driven ways of thinking. AI PhD Researcher Deepak Dennison (2025), in an essay on holes in AI knowledge, notes that, even though he grew up in a small town in India, he had a hard time believing his sick father could be treated by traditional medicine (that ended up healing him) instead of western techniques. He posits that ‘epistemological approaches rooted in Western traditions have come to be seen as objective and universal, rather than culturally situated or historically contingent.’ and that these ‘Epistemologies are not just abstract and cognitive. They are physically embodied around us, with a direct impact on our bodies and lived experiences.’

Information Representation and Retrieval

Although, as noted, information had always been an important aspect of Western tradition, it wasn’t until World War II that the field of ‘Information Representation and Retrieval’ (IRR) was official created (Chu, 2010). This was due to the vast amount of data generated during the war, mainly pertaining to weapons, their production, use and effect. After the war large amounts of scientific papers continued to be produced at a logarithmic rate. One account talks of how 2 million papers were being produced in the biomedical press per year alone, and if ‘journal reading is limited to 1 hour per day and 365 days per year, then it [would] take more than 27.4 centuries to read the output of 1 year’(Chu, 2010, p.2). Hence, a new approach for storing, organising, and processing the information was needed.

Professors Whisler and Leavitt, writing for The Harvard Business Review of 1958, were one of the first to name the solution to this problem as they proclaimed, “We shall call it *information technology*”. Stating that, with the use of computers, “information technology will spread rapidly... By permitting more information to be organized more simply and processed more rapidly it will, in effect, extend the thinking of individuals... to categorize,

digest, and act. . .” and in some ways they were right, at least about how quickly IT would spread.

In 1966 Lockheed Palo Alto Research Laboratory, the weapons people, created DIALOG. DIALOG was the first interactive online database search system. As a plaque in Mountain View California says “Its speed, ease of use, and wide range of data content attracted professional users worldwide including scientists, attorneys, educators, and librarians. DIALOG preceded major Internet search tools by more than two decades.” (Baker, 2021) Later in 1979, IBM published a full page advert exclaiming to the world, “Information: there’s a growing agreement that it’s the name of the age we live in.” before telling readers that their computer technologies were the answer to the ‘Information Explosion’. (oakbrookclothiers, 2026)

However, it seems that the field of IRR embracing of computers was both the solution to large amounts of data and perhaps, its source. Because much as getting a bigger closet allows you to get more clothes or urban planners adding more lanes to roads causes an increase in traffic, more information storage and processing was encouraging more data to be generated. In a 1980 PBS Documentary titled *The Information Society*, the host tells us ‘Information overload. There’s obviously been an information explosion in this country. There are more people than ever generating more and more information using newer and faster tools that process and transmit the stuff in overwhelming quantity. . .’ This is proceeded by a series of soundbites from influential figures, including Henry Kissinger, worried about the Information Overload and even questioning the intrinsic usefulness of said information. Whatever the talking heads concerns around the usefulness of information, it’s ambiguous relationship to knowledge or better decision making, it seems that no one paid them any mind. Instead, the computer industry continued to fixate on the first problem: more effectively collecting, organising, and processing data.

From Judgement to Calculation

The computerisation of data in the latter part of the 20th century exemplified The West’s glorification of information driven rational thinking. With more effective ways of collecting and parsing information, decision makers were increasingly relying on it to guide their thinking. Scholar Theodore Roszak, who was writing contemporaneously on the subject, voiced his concern that, “If people are persuaded to believe that the computer contains all that is of value, they will not look beyond the computer. . . an all-knowing, infallible,

totally efficient substitute for human judgement.” (1994, p.192)

Computer scientist Joseph Weizenbaum (1984, p.239) illustrates this point as he recalls a senate hearing on the illegal US bombings of Cambodia during Vietnam War. In this hearing Admiral Moorer claims that the reason for this was because the bombers were given targets labelled as being in Vietnam from a computer. He bemoans that “if we weren’t such slaves to these damn computers” this wouldn’t have happened. However, I believe there is another interesting force at play here: the use of computers as an appeal to authority. Both as a way to feel secure about making an important decision and, in some cases, cynically as a preemptive way to pass on the blame.

This use of computers to label bombing targets, feels analogous to Israel’s use of computer systems in choosing targets when genocidal bombing Gaza (Iraqi, 2024). In a talk I attended at Mozhouse Amsterdam, journalist Marwa Fatafta talked of how these systems take census data as well as live data to “estimate” how many civilians are in certain buildings, and then compare this number to how many Hamas combatants they believe are in the building (Mozilla, 2024). If the ratio is acceptable under current guidelines, the building is flattened.³ In both cases, an extremely important decision making process has been reduced from human judgement of a human situation, which is inherently imperfect and messy, to one in which a computer gives a binary yes or no. Of course, the following of orders from a computer here is not that distinct from the principle of obeying orders inherent to most nation state militaries. However, the use of computation here comes with not only an efficiency gain (ew) but importantly a heavy dose of ‘Mathwashing’.

‘Mathwashing’, as explained by its coiner Fred Benenson, describes how the use of words such as ‘algorithms’, ‘data’ and ‘model’, can be used to imply objectivity while ‘paper[ing] over a more subjective reality’⁴ (Woods, 2016). As a critique, it is often raised in relation to institutions’ and governments’ use of algorithms in decision making, and has become increasingly invoked to oppose the use of machine learning models. However, it seems to me that the use of ‘Mathwashing’ relies on the fact that we grew up with values that prioritise an epistemology based in data and its derivatives, something that computers do extremely well. Hence, we can also be inclined to ‘Mathwash’

³It may be too on the nose, but this appeal to computational information and calculation, feels very analogous to the ways religion and religious texts have been used to justify actions in both history and the present day.

⁴Possibly inspired by the work of Cathy O’Neil, and her book *Weapons of Math Destruction* (2016) which deals with similar themes.

ourselves, and seek authority in computation and digitised information.

Distance to and From

My Dad's family is from Scotland, but he has spent most of his life living in England. Hence, he has driven the same route down the spine of the UK over 200 times (at a low estimate). I have early memories of sitting in the car and hearing the TA (the in car traffic announcement system) interrupting Dido's 'Life for Rent' to tell us of traffic on the M6. However, in recent years, rather than rely on his impressive sense of direction and geographical knowledge, he uses GPS systems to inform the journey. When I asked him why he switched, he first replied, "I'm really not sure. The journey has always taken 6 hours, and it still takes 6 hours."⁵

When asked to reflect on the differences this new paradigm of navigation had compared to physical maps, he told me that he laments his geographical awareness. He described how with a map, one has to trace a route from point A to point B and that, importantly, requires you to look at the things you will navigate through. Furthermore, your eyes will naturally look around the map, over time you learn that 'Eastleach' is west of 'Broadwell'⁶. All's to say that even though this new information driven technology is ultimately more efficient for getting you somewhere, it comes with a mortgage of disassociating you from your locality. Hannah Arendt reflects on this dichotomy in "The Human Condition":

The fact that the decisive shrinkage of the earth was the consequence of the invention of the airplane, that is, of leaving the surface of the earth altogether, is like a symbol for the general phenomenon that any decrease of terrestrial distance can be won only at the price of putting a decisive distance between man and earth, of alienating man from his immediate earthly surroundings. (1958, p.251)

I believe this distancing from the sources of information, made possible by more efficient information driven solutions, comes with the personal mortgage of also distancing ourselves from ones own intuition or judgement. The use of

⁵He later added that he liked the app WAZE specifically because it enabled him to know where the police were hiding and the live traffic rerouting kept him at ease on the long drive.

⁶Ironically, I used Google Maps to fact-check this illustration, even though these are the two villages I grew up in.

abstracted information, rather than rely on ones own experience or memory, seems to be self perpetuating as the use of ‘just in time’ external information inhibits our ability to assign new information to memory. A 2011 paper entitled “Google Effects on Memory: Cognitive Consequences of Having Information at Our Fingertips”, found that:

... when faced with difficult questions, people are primed to think about computers and that when people expect to have future access to information, they have lower rates of recall of the information itself and enhanced recall instead for where to access it. (Sparrow, Liu & Wagner)

Or to put it another way, if we know it will be easy to look up information again, the memory we store is not the ‘information’ we found, but instead the process we took to look up the information. More recent papers have confirmed this conclusion, while emphasising that the ‘Google Effect’ is more pronounced in younger people and those with the most experience online (Gong & Yang, 2024). As someone who has always had an affinity with technology and the internet, I feel this ‘Google Effect’ acutely. It is fair to say the majority of my programming knowledge, the skill that I owe my income to, is less a knowledge of syntax and more of mastery of Googling questions and parsing Stack Overflow responses. It is therefore interesting to me, how my Dad, as someone who isn’t a ‘Digital Native’ and spent a lot of my youth making angry sounds at various digital gadgets, also became reliant on digital information, even at the cost of the social and personal mortgage of becoming distant from the landscape and himself.

Part 2

These days, I rarely have to delay the gratification of my cultural desires. I expect them to be met, if not instantly, then with all reasonable speed. I am grumpy to find that some obscure documentary is only available on a streaming service I don't subscribe to yet. If I want to know the source of a lyric or a line of poetry, I type the words and am annoyed if the answer doesn't appear right away. My hungry young self would consider me incredibly spoiled.

— Hari Kunzru, “Broken Links”

At the end of the 20th century, the internet and the information it contained were largely the domain of industry, government, and early tech enthusiasts. Although personal computers were a thing in the 80s and 90s, they were esoteric items, requiring technical knowledge and hence intimidating to new users. Writing in 1991, Mark Weiser the CTO of Xerox PARC, envisioned a world where this would be solved through an idea called ‘Ubiquitous Computing’:

The arcane aura that surrounds personal computers is not just a “user interface” problem. My colleagues and I . . . think that the idea of a “personal” computer itself is misplaced and that the vision of laptop machines, dynabooks and ‘knowledge navigators’ is only a transitional step toward achieving the real potential of information technology. . . We are therefore trying to conceive a new way of thinking about computers, one that takes into account the human world and allows the computers themselves to vanish into the background.

He goes on to tell a speculative story about ‘Sal’ who lives in a future where computers form the backdrop to her life. Most often these computers do things before she even asks, her door displays electronic information about when her kids woke up, and when she has to interface with devices, these interactions are seamless, she circles a quote in the newspaper to get more information. Although not quite in the way Weiser described, computers have become omnipresent. Smartphones, our main crazy powerful interfaces

to the digital world, and it's information, are so common they are no longer noteworthy.

Writer and Urbanist, Adam Greenfield notes that the smartphone is starting to be seen as a “necessity” rather than an “augmentation” to designers of shared spaces and worries that wayfinding aids, such as directional signs, may disappear from public landscapes (2017, p.25). As someone who has recently travelled without a smartphone, I can attest to that. Finding a campsite in the Algarve without a smartphone was near impossible, as most campsites marked on the street signage were closed, and newer campsites only findable with various apps. However, the assumption that travellers have a smartphone is a good one. People I encountered were interested (and slightly perplexed) that I had chosen to go on holiday without a smartphone. Imagine excitedly telling a stranger the opposite, that you had chosen to bring your iPhone on holiday with you. So how did these incredibly powerful computational information conduits become banal?

Frictionlessness

In his books *Frictionlessness*, Assistant Professor in Digital Aesthetics and Platforms Vernacular, Jakko Kemper describes his titular word as “a pervasive technological design philosophy” from Silicon Valley, that ideologically glorifies three central design values: “user-friendliness”, “connectivity” and “optimization” (2023, p.2). Uber is an illustrative example. A service that conveniently allows anyone with a smartphone (and enough capital) to optimally get from A to B by directly connecting them with a taxi without the friction of having to locate a local taxi service, call them, and hope they have an available driver. However, Kemper is quick to point out that this philosophy comes with an abundance of “destructive effects”. Chief among these are the negative impacts felt by the humans and environments integral in the creation of seamless devices. Kate Crawford (Researcher and co-founder of the AI Now Institute) and Vladan Joler’s (Professor and founder of SHARE) *Anatomy of an AI System* (2018) beautifully represents these effects in another context, that of Generative AI. Together, they created a huge anatomical map inscribed with all the labour, materials, and data that allows for the frictionless experience of the Amazon Echo Dot. In order to view the whole PDF on my 14 inch screen, I have to set the zoom level to 8%. Zoomed in you can learn of floods and gas explosions in the mines used to extract the raw materials, how in refining these same rare earth materials a nearly equal amount of radioactive waste is produced and how part of the

dataset contains TED talks translated by volunteers. All of this to create frictionless consumer experience for a given target market.

Integral to this design philosophy is an imagined end user, with who friction is first related then removed. Often these are called personas and, when I was a designer, were based mainly on interviews with your imagined or desired user base.⁷ Importantly these personas are not real people, they are at best averages, and by design ignore the ends of a bell curve. Often you will have a collection of personas to inform your design, but any number of personas that would be coherent to a design team, can't possibly encapsulate the multitude of real people who will choose to or have to interface with the resulting designed artefact. Hence, through the use of personas, a person is often designed for, as part of an average in some respects and simultaneously not designed for, as they are an outlier in others.

Here we can now see how even people who are part of the target market for given technology privately suffer as a result of their nonstandardness, as they expected to interface with an apparently frictionless thing. Sociologist Susan Lee Star, illustrates how often minorities and marginalised people will experience friction at best, harm at worst, through recounting of her own experience as a 'non-member'. She describes how due to her onion allergy, the seemingly 'ordinary, universal, ubiquitous restaurant chain' MacDonald's (2016) becomes a place of friction. Whereas for 'members', people conducive to MacDonald's standardised personas, an ordered big mac takes mere moments to arrive, her order takes 45 minutes and thus becomes a frictionfull experience. The social mortgage of a system fixated on efficiency.

Even though non-members slip through the cracks, frictionlessness as a design philosophy is radically popular and can be seen expressed in most of the products and services we interact with every day. Contactless payment, music and TV Streaming, bike sharing, cloud services etc. If embraced by a 'member', these frictionless artifacts promise smoothness, convenience and of course, efficiency.

Search

The miniaturisation of computers led to another example of the Silicon Valley frictionlessness design philosophy. The Smartphone. Giving users a user-friendly way to be connected to the internet, and all it offers, and, in theory, optimise their day to day life. Another example is the search engine, which

⁷Large companies like Google or Apple also heavily rely on information and data generated by users.

can be exemplified by Google Search. In their 1997 paper *The Anatomy of a Large-Scale Hypertextual Web Search Engine*, Brin and Page layout the foundations of Google and the problems it responded to. They identify how the amount of documents, information, on the web had exploded and how, much like the scientist in the 1950s talking about biomedical papers, “the user’s ability to look at documents has not. Hence, a new approach is needed to ‘bring order to the Web’, to navigate past the ‘junk’ and connect computer users with the information that is relevant.”

Although Google Search wasn’t the first, it undoubtedly has become synonymous with the modern web. A modern web where anyone with access can type in a few words and be met with a torrent of relevant information. It may only be me, but I feel people who grew up with the internet have a feeling that the only barrier between them and a solution is the construction of a perfect Google Search. I recall as a kid feeling that Google was so frictionless that I couldn’t grasp why relatives of mine weren’t using it. Sometimes rather than answer their questions, I would send them a link to “letmegooglethat.com”, where they would be met by an animation of their question being patronisingly typed into Google for them.⁸

Modern devices and the modern web, with Google Search as it’s information navigator, came together to give their ideal users frictionless access to all the information the internet has to offer. Much like how previous methods of collecting and synthesising information rapidly increased the creation of new information, 21st century IRR tools once again resulted in an explosion of new information. These included both historic information, as Google Books strove to digitise libraries, and, increasingly, new information created by users in more accessible online forums and social media platforms, known as Web 2.0.

Information Anxiety

In her TEDx talk, *Addicted to the answer – anxiety in the age of information*, Psychotherapist Sheva Rajaei describes how she spent days online trying to self diagnose her sore shoulder. For her, this resulted in a realisation, and an eventual OCD diagnosis. She was, as Susan Lee Star would say, a ‘non-member’ who experienced the web as a compulsive ‘search for certainty that never comes’.

In trying to write this essay I have also experienced this ‘search for

⁸Oddly now, as these systems have become more frictionless, they often choose to Google questions and I, now more Luddite, am the one asking them not to.

certainty that never comes'. I am currently writing on a desk that looks more like a campsite, surrounded as I am by pitched books and tented essays, most with titles that include the word 'Technology' or 'Information', and these are just physical texts that I am consuming. Although it's fair to say that I could have gotten these texts without the internet, search engines have made this accumulation near effortless. Research on a subject you care about is not inherently a negative thing. I am exploring. I am learning. However, at times I have also felt paralysed in a search for completeness. Putting off writing, to read more texts, scared my understanding of certain topics isn't good enough yet. Often looking for authoritative voices to validate and add persuasiveness to my own thoughts. Leading me to question whether I am 'datawashing' my own ideology by elongating my bibliography, rationalising personal stories with quotes from influential thinkers or breeding insecurity in myself by satisfying an urge to appeal to authority?

I am not sure of the answers to these questions and am unsure if they only occur to me because I am researching concepts like Data Gluts or Information Anxiety. It feels hard to draw a line between the more healthy and helpful form of research and a compulsive, possibly harmful, search for certainty.

A clearer, to me at least, example of this compulsive and harmful side can be found amongst my browser tabs about Information Theory. These are all the searches I am doing concerning buying a laptop SSD. Do I buy the sn7100 or the 990 Evo Plus, or maybe I should go for the sn850x? They are all basically the same, and after getting one I wouldn't know the difference but still I research. I paralyse myself in Reddit threads talking about power efficiency and the importance of DRAM, as already AI inflated prices continue to rise. I have researched prices. Negotiated good deals on secondhand marketplaces. Then left sellers on 'read' as I Google Search if this is really the right option for me. What am I looking for? Why am I unable to stop? Do I also have OCD?

I have flip flopped on this question. However, the more I think about it, I realise I am not alone in this behaviour⁹. I have been stood hungry on countless street corners while on holiday with friends, as someone gets out their phone to search for restaurants. Minutes will pass as options are weighed on their star ratings, locations, interior photos and menus. During these moments I have become frustrated with this digitally mediated version of travelling but who can blame them. To walk to all these places and access them ourselves would be impractical. Hence, why shouldn't we use these

⁹This also the conclusion that Sheva Rajae comes to, as she states that she's "noticed a troubling phenomena today more people sound like I did".

powerful pocket tools to find the best place to spend our hard earned money? To trust the recommendation and review algorithms? To be as efficient and rational as possible?

Opinions

As the web became easier to use, many more people headed online and one of the places many people congregated was Reddit, the self described ‘Front page of the Internet’. Reddit, founded in 2005, initially pitched its self as a web aggregator, allowing users to post links, text, images, and videos from around the web. Others on the site could up or down vote these links, and comments, for ‘quality’, adding a certain statistical validation. In effect Reddit was the latest offering in IRR, using ‘community’ efforts to filter for most interesting or important parts of the web, whether that be news, memes, or cat images. Key to this model was the idea of SubReddits, small niche and self moderating communities that would focus on everything from r/cars, r/travisandtaylor ,to r/germancitizenship.

Reddit, and websites like it, have thus created a new explosion of information. One that could be largely categorised as opinion. Now with relative ease an individual can get human generated information on any question, no matter how esoteric or personal. A cursory glance at Reddit shows you people seeking advice on what the best version of Linux is for a beginner (Sebby_Rogers, 2025), trying to identify what the weird cluster of goo is on their salad (I3uckets, 2025), or even whether or not they are the asshole for telling their aunt she has a watermelon arse¹⁰ (PickleweaselNaeNae, 2021). Importantly Reddit is a social media platform, with all the baggage that generally entails. So if the lure of more informed decision making or finding justification for your existing opinions isn’t enough to get you coming back to Reddit, it’s additive algorithm and slot machine like design is. Much like Google, and other platforms, while you go in search of data to answer your question, you are being mined as data to answer the question of how to keep you on the platform longer. An unholy symbiotic informational relationship continuously reinforcing the idea that more information is always a good thing. For many, myself included, this relationship results in a mortgage of internalised distrust of our own judgement. That we must consult the great digital oracle because it contains more and better knowledge than ourselves. All the while knowing that this act is paralysing, self reinforcing and ultimately labour in service to platform capitalism.

¹⁰The consensus was that they were both assholes.

Hence, we now find ourselves at the intersection of a culture that is reverential to rationality, accustomed to convenience and more thirsty than ever for information. Needs met by seamless smartphones with search engines and apps that give frictionless access to troves of established facts, personal opinion and aggregated data. However, as with other IRR technology, these new tools have resulted in an eruption of new information. A new class of technology, namely AI¹¹, aims to deal with this problem once and for all by analysing all digitised information and outputting convenient semantic answers.

¹¹As with the term information, AI is another contentious word. For the sake of brevity, I will use this term in the same way tech company marketing departments do, to denote any and all uses of LLMS, Machine Learning and Neural Networks. Although there are many fruitful discussions and critiques that can be had to the veracity of what these companies claim AI is and can do, I will mainly critique these on their own terms. Or in other words, if these technologies can do what they report to, what are the mortgages that emerge in this reality.

Part 3

*Autotune? I don't wanna hear it
That's just prepping us to be satisfied
Being sung to by something without a spirit
Until the human voice sounds so flawed and raw
That we just quit it*

— Bill Callahan, “Computer”

In 2024, Researchers published a study that confirmed what many internet users had felt for some time. “Google Search really [had] gotten worse” (Koebler, 2024). User’s struggling to navigate an ever enlarging internet, filled with vast amounts of pertinent information but also littered with copious SEO optimised pages, affiliate linking and spam, were offered a new IRR tool to make their lives easier. A simple, intuitive interface that reports to answer any question, including novel ones, by synthesising all human knowledge into a digestible output. AI, or more accurately Generative AI, feels like a natural step, if not the endgame, for a culture built on collecting, consuming and glorifying information, as well as one beholden to a frictionless design philosophy.

It is fair to say that GenAI’s adoption into being a normative technology has been rapid. Whereas Instagram took two and a half years to get 100 million users, ChatGPT (An LLM app) took two months (Chow, 2023). Most top results on my search engine, put its daily active user count at around 800-900 million, and this just one AI app. In my day to day life, I have seen many people use the ChatGPT to ‘Google’ questions, rather than actually going to Google. According to OpenAI (2025), “about half of messages (49%) are [people] ‘Asking’,” adding “people value ChatGPT most as an advisor” And even if you don’t use an app to interface with AI, our digital landscape is now marred by unasked for AI summaries and ‘Ask our AI’ buttons. Hence, in a lot of ways Generative AI is swiftly becoming the dominant form of consumer IRR and thus epistemology.

Whether or not it’s answers are accurate and complete is questionable. Dennison points out in their essay, *Holes in the web* (2023), that these models are trained on the internet which lacks ‘huge swathes of human knowledge’ (predominately non-western, oral and local) and hence, ‘By definition, generative AI is shockingly ignorant too’. Ergo GenAI, like past IRR tools, once again reinforces western cultural and knowledge hegemony.

Now with a healthy dose of computer powered ‘mathwashing’. In fact, in many ways, GenAI is embedding and exacerbating many of the existing social and personal mortgages already discussed.

Entrenchment

If we take the mortgages discussed earlier such as distance, “The Google Effect”, distrust in ones own decision making ability and information anxiety, GenAI amplifies them all.

If one is already predisposed to seeking authority from information sources such as the internet, GenAI offers a more frictionless avenue. While its intuitive interface attracts a whole new cohort of users, who may have found traditional ways of surfing the internet difficult. Also, due to it being generative, models are also able to answer novel questions with seeming plausibility (Bender et al., 2021). These models can also work in a virtual layer above your day to day task making it easier to get advice in the context of what you are doing, whether that be writing an email to your boss, choosing which product you should buy, or augmenting your reality as you walk around the city. All the while further distancing you from the sources of information by obscuring their origins. “I read this in X magazine”, “I heard this on Y Podcast”, “Person Z wrote this” all become blurred into a soup of “ChatGPT told me this”.

This frictionlessness is paired with a ‘mathwashed’ omniscient sense of authority, that these models are trained on all human knowledge using huge data centres and inflated marketing¹². Together convenience and authority meet and the ‘Google Effect’ can take root, or in other terms, we become deskilled. A recent study has shown that Doctors who use AI for spotting precancerous growths for 3 months have a 20% relative drop in their ability to do so without the AI tool (Budzyń et al., 2025). Are we all facing a similar deskilling when interfacing with AI tools?

For as long as I can remember, a close family member of mine has enjoyed writing small poems for his friends. Often to say thank you or for special occasions. Recently they told me they started using AI to help write these poems. They caveated their use with the fact, they only use it as a starting point, and heavily edit the output but part of me wonders if they can still return to unaided writing or, if like those Doctors, they have been fundamentally deskilled. That they no longer are able to rely on their own skills and imagination. If, like me on that hill in Portugal, they now feel the

¹²Fear the singularity narratives etc

constant need for that digital authority?

Accordingly, it feels pertinent at this point to once again ask what is lost in this relationship with seamless access to information. After all, if it can be efficient, useful and readily accessible, why not return to its comforting embrace again and again?

Humanness as Friction

Kemper references the work of digital humanities scholar Alan Liu, to make the point that the design philosophy of frictionlessness is not bound only the artifacts and services we interact with but has spilled over into our everyday expectations of each other and the world. Liu stating that:

through automatic participation in a universal environment of ‘user-friendliness’, to corporate culture as the stage of general culture, as the new model of general sociality, interaction and communication. (2004, p.172)

In a similar sentiment to Liu’s, Greenfield recounts sociologist Anne Galloway’s suggestion that discussions and introductions of new computational augmentations, “whether consciously or otherwise, ‘position[s] everyday places and social interactions as somewhat lacking or in need of improvement.’” (2017, p.82)¹³ What I take away, and the point I am attempting to make, is that all of these frictionless interactions can lead to us embodying a feeling that alternatives avenues to information are full of friction and hence inherently less appealing. That it feels easier and more efficient to ask an AI chatbot than Google a question. To Google that question than find a relevant book. To read a book rather than ask a human¹⁴. And in this reality, there are real social mortgages.

Through this prioritisation of efficiency there is a loss. For one, there is a robbing of oneself from discovering new things that we might not even know interest us. Take for instance, the earlier example of reading a map and how while tracing your route you unconsciously learn how places are situated in relation to each other, or may spot an interesting feature nearby. Or take how reading a book to find something out can leave you with more questions than answers. When it comes to using IRR tools rather than asking people there is even more at stake than incidental information, it’s a lost chance to connect with another person. For instance, when I choose to use an app

¹³Annoyingly Greenfield doesn’t cite the source of this statement

¹⁴Not that it is always this linear.

for directions, rather than ask someone, I take away the opportunity for follow-up questions that could bring me closer to someone. ‘I haven’t been there in years!’ ‘How come you’re going there?’ ‘I know this area so well because I used to. . .’ ‘Oh, you should check out X, Y, Z while you’re there?’ Often the conversation can result in being more important than the answer you set out to find. Getting to the point, isn’t the point.

Musician David Byrne is more direct in his accusation, claiming that it is not a bug (mortgage) but the primary goal of consumer technology to “eliminat[e] the need to deal with humans directly” (2017). For him engineers who see human interaction as “complicated, inefficient, noisy, and slow”¹⁵ and conclude it should be made more frictionless, don’t see that these same behaviours bring “the benefit of surprises, happy accidents, and unexpected connections and intuitions”.

In writing this I worried that I may come off as having fallen to a state of ‘technopanic’ or, simply, too all encompassing in my analysis, but it is an acknowledged reality of our day that people are lonelier than ever. A study by American Perspectives Survey found that the percentage of people with 3 or more close friends went from 73% in 1990 to 49% in 2021. Alarming, the number of people no close friends jumped from 3% in 1990 to 12% in 2021 (Cox, 2021). Of course, there are so many factors that may be contributing to this, I am in no way claiming that frictionlessness access to knowledge is solely responsible. However, I do think that all these lost moments of conversation are lost moments of connection, and of building friendship.

We Should All Be Perfect

In much the same way that market ideas of efficiency and frictionlessness have trickled down to our expectations of daily interactions and of each other, it may be that, as information becomes more easily available, there is more of a requirement to use it. Put differently, that the imagined notion that we all have frictionless access to information can lead to rising expectations of ourselves and others to be more informed and rational.¹⁶

¹⁵A sentiment echoed by Ellen Ullman, in their essay *Out of Time: Reflections on the Programming Life* (1995)

¹⁶A similar historical example of this technological induced change of expectation has been articulated by Technology Historian Ruth Schwartz Cowan in her book *More Work For Mother* (1985). She lays out how modern advancements in household technology (dishwasher, washing machines, electric stoves etc) fell short of their promise to give women more free time, by virtue of their efficiency gains, but instead just increased the burden put on household work via inflated societal expectations of cleanliness.

Steve Mann is best known for being a living cyborg, and considered by many to be the “father of wearable computing”. Since the 1980, he has donned some kind of device to augment his life. In a paper from 1996, Mann describes his “WearCam”, “a wearable multimedia system with video processing capability and wireless Internet connection” and specifically its use as a “face-recognizer”. He proposes many ways his device can do this, including one permutation that involves visual memory system that reminds the wearer when they have seen a face before.¹⁷

In a now deleted 2024 Apple Intelligence advert, actress Bella Ramsey sees someone vaguely familiar wave at her at a party. Ramsey quickly hides behind a wall, whips out their iPhone and asks Siri what was the name of the guy they had a meeting with a couple on months ago. Ramsey is told by Siri, just in the nick of time, that the guys name is ‘Zac’. Ramsey turns round to meet him, “Hey Zac!”, “of course I remember you!” (QuirkyFilms, 2024).

As close as these two examples are, I think there is a really important difference between these two uses of IRR. Mann is clear in his proposal that his device is a “prosthetic” aimed at helping those with visually impairment and “visual amnesia”, commonly understood as being disabilities. In contrast, the Apple advert positions Ramsey’s forgetfulness as less than expected behaviour, when to my eyes forgetting someone’s name that you met a couple of months ago is very common and nearly always harmless, not something in need of a prosthetic aid.

Computer scientist and founder of DAIR, Timbit Gebru and Philopsher Émile P. Torres claim in their 2024 *TESCREAL Bundle* paper that many of the loudest proponents of AI, and especially of Artificial General Intelligence, have TESCREAL leanings. TESCREAL being a bundle of closely linked ideologies namely: transhumanism, Extropianism, singularitarianism, cosmism, Rationalism, Effective Altruism, and longtermism¹⁸. For the sake of brevity (and scope), I will only focus on the ideology of transhumanism, which they define as:

An ideology centered around the idea of humanity “transcending itself” (see Huxley, 1957). Modern transhumanists affirm the feasibility and **desirability** of radically “enhancing” the human organism, thus enabling us to become immortal, superintelligent,

¹⁷He suggests this system would be a visual equivalent of Starner’s Remembrance Agent (Rhodes & Starner, 1993), another vaguely unsettling premonition of our AI world.

¹⁸Spell check freaked out when I copied and pasted that in.

more rational, and so on. [Emphasis Added]

It seems to me that what is at play in that Apple advert is a smattering of that same transhumanist ideology. Other AI powered IRR products radiate a similar tone. Whether that be smart glasses that help you choose what to say in a conversation, dating tools that scan a profile to tell you how to flirt, pendants that claim to give you perfect memory by recording and parsing your day. All launched with similar sunlit videos of smiling people, all implicitly telling us that we should desire to surpass our imperfect human state. That all of us, disabled or non-disabled, unaided by gadgets, gizmos, or prosthetics are not good enough. We are clumsy, inefficient, irrational and too stupid. And that this is not OK.¹⁹

This carries for me a real fear, in the form of a personal mortgage, that we are on some level embodying these values. That maybe, that's why I didn't trust my memory on that hill in Portugal and why I find myself appealing to the authority of the internet in so many day to day things.

¹⁹I feel this is also similar to the idea of beauty standards.

Conclusion

This essay started with me above a lake in the middle of nowhere, questioning why I yearned so strongly for the warm embrace of the Internet, the vast amount of information it contains and the calming authority it offers me. In an attempt to answer this, I have meandered through the history of information and IRR over the last couple centuries. Tracing a path that emerged from a Western tradition that prioritise rational decision making and epistemology based on material evidence. Running through how statistics informed government and empirical research, then how business embraced early computers. Then eventually, how through frictionless interfaces the vast majority of people were invited into a world where they could now look up anything, no matter how trivial or subjective, anywhere and at any time.

Along the way, noting how a series of more sophisticated IRR systems answered the information explosions of their predecessors, while the resulting efficiencies created yet another explosion (Synthetic slop/content, here we come). And how these systems, epistemologies and values can incline us to ‘Mathwash’ ourselves, and seek authority in computation and Zettabytes of information.

Throughout, I inquired to what I am losing in this relationship with IRR, or, put another way, what mortgages we are made to carry when interfacing with these efficient systems. Firstly, I believe the distance created from the sources of information can estrange us from our environment, the consequences of our actions, and each other. Leading us to further distance ourselves from our own judgement, intuition and serendipitous information, encounters, and connection. Secondly, that frequent use of IRR systems may result in deskilling, and hence a reliance on these technologies. Thirdly, that the idea that all this information can bring us to certainty and a correct answer, can lead to information anxiety and a resulting paralysis. Lastly, that many of the previous mortgages collude to advance a transhumanist ideal of perfection, that can create insurmountable expectations of ourselves and each other.

While attempting to answer those original lakeside, possibly unanswerable, questions in the course of this essay, I felt all of these mortgages. Social and personal mortgages, not instantaneously acquired and felt, but built over years while interfacing with frictionless IRR systems. For me, this essay marks the start of my own attempt to depart from the automatism of default usage of increasingly seamless information systems. Whereas designers Luna Maurer’s and Roel Wouters’s *Designing Friction* (2024) manifesto invites

designers, entrepreneurs, and architects to embrace fiction in their outputs, I want to become more open to inviting friction, imperfection, and unknowing into my day to day life. Not only to try and shrug off some of these mortgages but to experience the beautiful serendipity, connection, and self reliance that may emerge. Weizenbaum states that the relevant questions on ‘Computers and Mind’, “cannot be settled by asking questions beginning with ‘Can.’ The limits of the applicability of computers are ultimately statable only in terms of oughts.” (1984, p.227) For me this includes frictionless IRR. So while these systems will inevitably still have a place in my life and work, I want to become better at deciding when to query them and when to thrive in uncertainty.

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