The Grand Decoupling of Intention and Agency

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Abstract

As technology grows ever more integrated into our lives – shaping not only how we act but what we fundamentally want – humanity faces a critical juncture in preserving its most defining trait: the capacity for self-determined choice. Tracing this evolution from small-band egalitarianism through industrial mechanization and into today's data-driven platforms, we see how once-simple tools have transformed into systems that direct and commodify our intentions for profit. Left unchecked, these processes threaten to *lock in* complete intention capture, overriding personal will and granting primacy to technological imperatives. Drawing on historical precedents of path dependence in social and technological evolution, this paper argues for a deontological moral and design principle – the Intentional Categorical Imperative – to ensure that every advance in automation and algorithmic influence expands rather than constrains human agency. By embedding this principle into institutional policy, legal frameworks, and technical design, we ensure technology remains a means of genuine human flourishing rather than a vehicle for our subjugation.

Keywords Human Autonomy · Social Evolution · Path Dependence · Technosphere

Introduction

Human society evolved on the assumption that individuals possess free will – the capacity to set goals (intent) and carry them out (agency). Philosophers from Immanuel Kant (1785) to more contemporary theorists like John Searle (1983) and Harry G. Frankfurt (1971) have argued that much of what makes us human stems from our ability to freely form intentions and enact them. This tight coupling of intention and agency is central to notions of moral responsibility, creativity, and personal identity. In this paper, we use the term "intent" to mean the goal or motive an individual sets, while "agency" refers to the capacity to realize that goal through decisive action. In everyday life, these two concepts appear intertwined: when you intend to learn a new skill, you typically have (or seek) the agency to practice and acquire it. Under our framework, however, these concepts can become decoupled – one's goals may be co-opted by external forces, or one's ability to act may be suppressed, resulting in a diminished sense of autonomy.

From an evolutionary perspective, our species' unique combination of advanced cognitive skills and social coordination helped forge this tight coupling of intent and agency. Anthropologists such as Michael Tomasello (2014) and Boyd & Richerson (2005) have shown how cooperative endeavors like hunting, resource sharing, and cultural transmission necessitated both clear individual intentions and the collective capacity to fulfill them. Over millennia, these traits enabled humans to form increasingly complex societies, anchored on the belief that individuals can and should choose their actions according to personal or communal objectives. Yet, as societies grew and technologies advanced – from chiefdoms and agricultural states to industrial manufacturing and digital platforms – the ways intent and agency interact have changed dramatically. Early innovations (like the printing press or mechanized tools) largely amplified our individual agency, but more recent developments in mass media, algorithmic curation, and AI-driven recommendations can start to reshape our intentions – nudging us toward certain products, behaviors, or beliefs. Moving into the present day, rapid breakthroughs in Artificial Intelligence (AI) and Brain-Computer Interfaces (BCI) promise to further erode the boundary between internal will and external control, potentially threatening what we cherish as genuine human autonomy.

Against this backdrop, the paper is organized as follows:

- *Section 1* traces how social structures historically shaped the interplay of intent and agency, from small egalitarian groups to large nation-states.

- *Section 2* outlines the technological evolution from simple tools that enhanced our will to complex systems that direct it, culminating in the current age of AI-driven platforms.
- *Section 3* demonstrates why these trends, left unchecked, risk gravitating toward complete intention capture – the total replacement of individual goals with machine-guided purposes.
- *Section 4* introduces a moral and design principle (the Intentional Categorical Imperative) that ensures advanced technologies must expand the user's autonomy rather than constrain it, offering a practical route to maintaining human-centered agency in an era of accelerating innovation.

By analyzing out this historical, sociological, and technological progression, we aim to show that now is the crucial moment to anchor technology design in ethical safeguards. The future of humanity's defining trait, our free and purposeful will, will hinge on the principles we adopt at this turning point.

I The Social Evolution of Intent and Agency

Human societies have progressed from small, egalitarian bands to vast state-level complexes, gradually transforming how individuals form and carry out their intentions. While early groups display a tight coupling of intent and agency – people act directly on their needs – larger societies introduce hierarchical organization that can constrain certain freedoms. At the same time, these structures grant individuals new opportunities and higher-level pursuits, suggesting a dynamic equilibrium where loss of some self-directed intentions is counterbalanced by a broader range of possibilities.

Hunter-Gatherer Egalitarianism ("Big Man" Era)

In the earliest human communities – often labeled "bands" or small tribes – populations typically ranged between twenty and fifty individuals, living nomadically and practicing foraging rather than settled agriculture (Lee & DeVore, 1968; Sahlins, 1972). These societies are widely characterized as egalitarian, featuring minimal social stratification and a fluid approach to leadership. When leadership does emerge, it typically appears in the form of a "Big Man" or "Headman" who might lead a hunt or mediate disputes. Significantly, this leadership is situational and often temporary: the group can withdraw support the moment the leader's decisions cease to benefit the collective (Woodburn, 1982).

Because individuals in hunter-gatherer settings directly acquire resources – physically hunting, gathering, or making tools – there is a pronounced bond between what they intend (e.g., to secure food) and their capacity to act on it (e.g., going out to track game). Decision-making is thus decentralized and personal. One's day-to-day goals – finding water, scouting a safe camping spot – can be carried out without deferring to a higher authority. Such immediacy fosters a profound sense of self-reliance, as everyone must rely on their own skills and initiative for survival.

In these small-scale, mobile contexts, personal autonomy is not just a cultural preference but a practical necessity. Without complex hierarchies or rigid social roles, there is little systematic *decoupling* of intent from agency. Each individual retains direct control over most aspects of their survival, setting a baseline form of free will that later social complexities will both challenge and, in some respects, expand.

Tribal & Horticultural Societies

As groups transition from pure foraging to more stable, semi-sedentary life, they begin engaging in small-scale farming or horticulture, often cultivating gardens alongside hunting and gathering (Harris, 1979; Service, 1971). This shift supports population sizes of roughly 100 to 200 members, opening opportunities for more consistent food production and shared labor. Leadership structures become slightly more formal: councils of elders or recognized leaders coordinate communal tasks such as planting cycles, ritual feasts, or resolving inter-village disputes. Power, however, remains relatively diffused, with leaders frequently required to persuade – rather than coerce – followers (Carneiro, 1970).

At the household level, individuals largely retain control over daily decisions – how to tend their gardens, raise small livestock, or barter surplus crops. Yet as certain projects (e.g., large harvests or group ceremonies) demand coordinated effort, decision-making shifts partly to leadership figures. This dynamic marks a mild decoupling of intent from agency: people still shape personal objectives (e.g., what to plant), but collective goals – such as managing irrigation or timing a communal feast – require alignment with the group's agenda. As a result, carrying out one's own plans may hinge on decisions made by councils or recognized headmen.

While personal autonomy remains considerable, the seeds of social hierarchy appear as leaders consolidate some authority to streamline group endeavors. Importantly, the trade-off is not purely a loss of self-direction: by pooling resources and labor, these societies can undertake projects – like managing water systems or communal rituals – that expand individual well-being and create new contexts for exercising intent. This dynamic foreshadows how larger-scale

social structures will continue to recalibrate the balance between personal agency and collective coordination.

Chiefdoms

With the advent of more productive agriculture – and the surplus it creates – populations can expand into the thousands (Earle, 1997). This abundance supports a hereditary chief, who typically wields authority to organize large communal endeavors such as irrigation projects, construction of fortifications, or elaborate ceremonial events (Flannery, 1972). Tribute systems become common, wherein individual households remit part of their yield to the chief, who then redistributes resources back in ceremonial feasts or broader public works. Although this concentrates power, it also creates a more structured political economy in which prestige and material wealth flow through the chief's hands (Claessen & Skalník, 1978).

On a day-to-day level, households maintain substantial control over small-scale production and trade. Yet when it comes to major collective tasks – canal building, surplus storage, or boundary defense – chiefly directives set the agenda. This marks a moderate decoupling of intention from agency: individuals or family groups still determine many personal goals, but large-scale undertakings require alignment with a central authority. In practice, chiefs often must balance redistributive generosity (to maintain loyalty) with commands that effectively harness the community's labor and resources.

The emergence of a centralized figure like a hereditary chief reduces the individual's direct influence over high-level decisions, yet it also expands the scope of what the society can accomplish collectively. People may lose autonomy in grand infrastructural projects but gain access to more stable food supplies, ceremonial prestige, and broader economic networks. This evolving trade-off underscores the theme that social complexity can diminish certain forms of self-direction while opening avenues for more specialized or community-driven pursuits.

Early States

As societies transition to early statehood, we see the formalization of centralized authorities (kings, pharaohs) and the rise of codified laws (e.g., Hammurabi's Code) (Mann, 1986; Trigger, 2003). These states maintain permanent bureaucracies – scribes, tax collectors, and officials – alongside a standing military to secure territories. Driven by larger populations and more complex trade networks, early states command resources on a scale far beyond chiefdoms, enforcing tribute systems and legal codes that govern vast regions (Scott, 2017).

While individuals continue to hold personal goals (e.g., family welfare, trade, local community ties), the state's agenda now frames broader economic and social activity. People are bound by taxes, labor corvée, or conscription, making local autonomy subordinate to centralized power. This structure marks a marked decoupling of intent from agency: although personal needs still matter, citizens must navigate an expansive hierarchy for most significant actions – whether acquiring land, accessing infrastructure, or defending against external threats. Compliance with state mandates becomes a condition for securing such benefits.

The formalization of institutions pushes individual agency into a carefully regulated context, where large-scale decisions – allocation of labor, resource distribution, regional defense – emanate from a core authority. Nevertheless, states also provide stability and shared systems (roads, irrigation, defense) that enable many people to focus on specialized ventures (crafts, commerce, scholarship) beyond survival tasks. As with chiefdoms, the trade-off involves relinquishing certain direct freedoms to gain access to a more structured and potentially prosperous societal framework.

Feudal & Imperial Systems

Building on the organizational foundations of early states, feudal and imperial regimes (as seen in medieval Europe, Rome, and dynastic China) introduce layered aristocracies with lords, vassals, provincial governors, and a central sovereign (Bloch, 1961; Tainter, 1988; Gernet, 1996). In feudal Europe, for instance, peasants or serfs are often tied to the land, bound by obligations to provide labor or produce to their liege lord. Imperial systems frequently replicate these vertical hierarchies across vast territories, using elaborate bureaucracies and local power structures to maintain order and collect tribute.

This configuration marks a high decoupling of individual intent from the capacity to act, especially for those at the lower rungs of the hierarchy. While individuals can still make decisions about day-to-day activities (e.g., deciding which crops to plant, managing household tasks), large-scale changes – like altering land distribution, participating in governance, or shaping the legal framework – remain the prerogative of higher strata (lords, emperors, or state officials). Social mobility is severely constrained; many individuals lack the freedom to leave their assigned estates or obligations.

Rigid hierarchical structures limit personal agency and reinforce a system in which most people must conform to obligations passed down from above. Yet these imperial or feudal arrangements often provide a measure of stability, such as legal codes, land tenure practices, or military protection. Although peasants surrender a portion of their autonomy, they benefit from established social orders that manage conflicts, organize defenses, and facilitate interregional trade – elements that, in turn, can expand horizons for artisans, merchants, and other specialized roles within the system.

Modern Nation-States

With the rise of modern nation-states, we encounter large-scale bureaucracies and administrative systems capable of governing millions – even hundreds of millions – of citizens (Tilly, 1990; Fukuyama, 2011). Some states adopt democratic structures, granting voting rights and civic participation, while others maintain more authoritarian or mixed forms of rule. Rapid industrialization, global trade networks, and the formalization of public institutions (education, healthcare, welfare) shape a system in which the central government orchestrates wide-ranging policies and infrastructure to manage complex societies (Polanyi, 1944).

On one hand, individuals have greater channels for expressing their will – through elections, protests, or local governance – than in feudal or imperial regimes. On the other hand, the sheer complexity of modern governance and economics narrows the influence of personal decisions on large-scale outcomes. Regulatory agencies, expert councils, and interlocking bureaucratic frameworks handle domains like resource allocation, public safety, and financial policy, often operating far beyond direct public scrutiny or intervention. This results in a systemic decoupling: while people retain personal freedoms in everyday life, the capacity to directly shape overarching policy or national priorities is diluted by layers of representation and specialization.

Even as institutional density grows – providing extensive services, infrastructure, and safeguards – it also creates a gulf between personal will and systemic action. Individuals benefit from educational systems, social safety nets, and global trade opportunities, yet the bulk of macro-level decision-making rests with professionalized institutions. This interplay exemplifies a persistent theme: larger social structures can free the individual from many rudimentary tasks and dangers, but at the cost of further distancing day-to-day intentions from sweeping collective decisions.

Freed Agency for Higher-Level Pursuits

Over the socio-historical trajectory described, the apparent loss of direct individual control can simultaneously serve as an enabling mechanism. While decisions once fully in the hands of the individual are transferred to a higher authority – chief, king, or government – this shift can liberate personal intent for higher-level pursuits. Social structures achieve this through two main mechanisms:

- *Relief from Constant Survival Struggle*: In simpler societies, each person had to continuously secure basic needs, whether by hunting, gathering, or defending territory. Although this guaranteed high personal autonomy, the demands of survival consumed much of one's energy. By contrast, in more complex polities, centralized authorities gradually assume responsibilities like border security, infrastructure maintenance, and conflict resolution. This frees individuals from exhaustive survival tasks, allowing them to invest their intentions in pursuits beyond immediate well-being – be it crafts, commerce, or education.
- *Specialization and Cultural Complexity*: By transferring essential communal functions – road building, law enforcement, irrigation systems – to institutional bodies, societies create the space for individuals to specialize (Hobbes, [1651] 1985; Locke, [1690] 1988). In many cases, this leads to flourishing in the arts, the sciences, and diverse intellectual fields. A stable environment, facilitated by shared governance, means not everyone must toil simply to survive; instead, people can develop skills and professions that deepen cultural and economic complexity.

Through a reciprocal contract with constituents, societies develop and complexify, and certain aspects of personal autonomy inevitably become channeled through broader systems. However, this very process frees individuals from perpetual subsistence concerns, empowering them to expand their range of intentions – from creative arts and scientific discovery to cultural and technological innovation.

II Technological Evolution of Intention Capture

Technology progressed from simple aids that merely extended human agency to sophisticated systems that now reshape our very desires. Initially, tools posed no threat to individual will, simply enhancing people's ability to hunt, gather, or build. Over time, however, the integration of technology into monetary economies birthed powerful incentives to capture user attention – and, as digital platforms matured, to steer user intentions. Ultimately, these systems evolved to direct human behavior for profit, pointing toward a future in which complete intention capture may loom if no

safeguards intervene.

Simple Tools (Prehistory to Early Civilization)

In their earliest forms, technologies like stone axes, spears, and digging sticks served only to boost human capability, addressing physical or cognitive limitations without encroaching on what people wanted to do (Childe, 1936; Renfrew, 1972). For instance, a spear heightened one's effectiveness in hunting, but it did not modify the inherent desire to obtain food or protect the tribe. These implements responded entirely to user-driven intentions, functioning as inert objects activated solely by human will.

Because these tools emerged in contexts where subsistence was the primary economic driver, there was no monetized system pushing them to manipulate user decisions. Instead, basic survival imperatives guided their use: a sharper axe or more efficient digging stick simply improved the user's odds of thriving in resource-scarce environments. Absent a formal market structure, technology remained an unambiguous aid – an extension of human agency, with minimal risk of altering the user's underlying goals.

Mechanization & Early Industrial Tech (Late Middle Ages–19th Century)

The advent of windmills, waterwheels, and eventually steam engines ushered in an era where mechanical force liberated human labor from some of its most grueling tasks. Mills that once required hours of manual grinding became automated, freeing workers to pursue other endeavors (Landes, 1969). Over time, the mechanical clock and factory whistle culture reshaped how people allocated their day, promoting regularized shifts that standardized the rhythms of both labor and life (Thompson, 1967).

There is a partial reshaping of daily life here, as laborers grow tethered to the schedules of machines and factory routines. However, technology in this era did not significantly create new consumer desires; it simply fulfills old ones more efficiently. Thus, a worker's core intentions (to earn a living, feed a family) persist, even if the means of carrying them out follow the machine's timetable.

Mass Production & Consumer Economies (Late 19th–Mid-20th Century)

The rise of assembly lines, household appliances, and improved infrastructure (railroads, telegraphs) propelled production into mass scales. Household tasks, from washing clothes to cooking, were gradually made easier by home appliances, allowing families to spend their time on other pursuits. Simultaneously, personal cars and radios conferred a sense of mobility and connectivity that earlier generations never knew – apparently increasing agency by offering rapid travel, quicker communication, and exposure to broader cultural and entertainment options (Galbraith, 1958).

During this period, advertising solidified its role as a major force in shaping consumer culture (Ewen, 1976). Rather than merely meeting existing needs, ad campaigns began to manufacture demand by creating desires for novel products – cars, branded clothing, new household gadgets. While these marketing strategies did not fundamentally override an individual's core survival intentions, they introduced the phenomenon of attention capture, where targeted messaging could preoccupy consumers and redirect them into specific consumption patterns. Profit increasingly derived from fueling continuous consumption cycles. To thrive in competitive markets, corporations invested in brand-building, developing tactics that tapped into consumers' underlying motivations and twisting the resulting intentions to fit that which benefitted the corporations. These campaigns were early glimpses of intention-shaping, though still relatively crude by modern standards.

Digital Systems & Personal Computing (Late 20th Century)

The arrival of personal computers and the early internet revolutionized everyday tasks, empowering individuals to to work faster and more efficiently. Crucially, these systems were primarily user-driven: software simply responded to explicit commands, fulfilling preexisting objectives (Castells, 1996; Ceruzzi, 2003). Within this era, intention-shaping tools remained limited. Early online ads and pop-up banners appeared, but personalization was still elementary. Users generally initiated searches or navigated websites on their own terms, thus retaining the power to define why they were online in the first place. Although minor nudges existed, they lacked the algorithmic precision seen in later periods.

Most profits stemmed from selling hardware (PCs) and licensing software (operating systems, productivity suites). Internet service providers (ISPs) charged for dial-up connections, but widespread data monetization – the hallmark of contemporary tech giants – was only nascent. In short, corporate revenues depended on serving user-driven tasks more than on shaping user intentions.

Internet Platforms & Data-Driven Economies (Late 20th–Early 21st Century)

Search engines, social media networks, and e-commerce sites offered convenience of agency: instantly locating information, connecting with friends, and purchasing goods from anywhere. At face value, users appeared in control, choosing what to click or watch. Beneath the surface, however, these platforms ran vast data-harvesting operations that profiled user behaviors and preferences (Zuboff, 2019). The result was a new level of targeted efficiency – whether in searching for a product or curating a personalized news feed.

As these platforms matured, recommendation algorithms shifted from capturing attention to actively steering user behavior. "You might also like…" features shaped consumption habits and even social or political leanings (Pariser, 2011). This marked a deeper incursion into the realm of desires: it was no longer just about finding what users wanted, but about suggesting what they should want next – an evolution from mere facilitation to strategic manipulation.

The attention economy thrived on maximizing engagement; more time spent on a platform meant more ad views and higher conversion rates. Detailed user profiles – aggregated from clicks, shares, and online interactions – became a lucrative commodity. Companies swiftly realized that by directing user attention and nudging intentions, they could boost ad revenue and lock in consumer loyalty, aligning user goals ever more tightly with corporate profit imperatives. Thus, What began as a tool for simplifying tasks – searching, shopping, socializing – morphed into an infrastructure that could influence and generate user wants. Platforms no longer merely respond to user intentions; they increasingly shape them from within a data-driven ecosystem.

Algorithmic Personalization as Social Infrastructure (Present Day)

Today's AI assistants, curated feeds, and predictive analytics offer frictionless navigation through daily life. From auto-scheduling appointments to predicting one's next purchase or piece of content, these tools minimize cognitive load and optimize countless routine decisions. The promise: by automating minor tasks, users can invest more focus on creative or strategic endeavors.

However, as personalization deepens, these systems can reshape not only how we act, but what we fundamentally want. Continuous exposure to algorithmically tailored content can reconfigure values, tastes, and even political beliefs (Tufekci, 2014; Lanier, 2011). In other words, the shift from fulfilling intentions to forming them grows more pronounced. Rather than waiting for a user to articulate a desire, the platform preemptively proposes – and thereby guides – the user's next aspiration.

Corporations profit most when they can deeply personalize ads and overall experiences – amplifying user engagement and spending. This intensification of "recommendations" often boosts platform revenues but can undermine user autonomy. Algorithms now operate as a social infrastructure, transcending the role of mere facilitator. They engineer desire, aligning user intent with corporate objectives in ways that may supersede genuine self-actualization.

Intention as a Service (Speculative Near Future)

Emerging visions of near-future technology promise hyper-autonomous systems – advanced AI platforms capable of orchestrating entire life trajectories. From health monitoring and financial planning to relationship management, these tools suggest a reality of *decision-free* living, wherein the AI optimizes every facet of existence (Harari, 2018; Tegmark, 2017). Advocates argue this scenario parallels earlier social evolutions that offloaded basic security and infrastructure to centralized authorities: by outsourcing mundane choices, humans supposedly gain more freedom to engage in creative or intellectual pursuits.

The difference here is the totality of the technology's scope. If these systems manage relationships, career decisions, or personal goals, users might become bystanders to their own lives. Rather than deciding one's aspirations, an algorithm could present "best path" scenarios, effectively defaulting people into a narrow band of outcomes. Over time, genuine self-direction may atrophy; even existential life choices risk being guided by AI "recommendations" that optimize for efficiency or corporate profit rather than individual fulfillment.

In such a paradigm, whoever controls the technology stands to profit from every user decision. If the AI's services hinge on in-app purchases, exclusive partnerships, or subscription tiers, every step of a person's life becomes a potential revenue stream. The more deeply intentions are outsourced, the more captive users are to the platform's financial incentives. Consequently, intention itself becomes a commodity shaped by corporate-driven algorithms, rather than an authentically personal resource. This final progression shifts technology from aiding human agency to superseding and redefining it. In doing so, it seals the transition from *simple tools* to *complete intention capture*, unless countermeasures are introduced.

From Tools to Attention & Intention

Technology has traversed a clear path from mere tools that extended human agency to sophisticated systems that now influence and shape our very intentions. Initially, technologies like the stone axe or the personal computer emerged as direct amplifications of human capability, responding explicitly to user needs without altering the underlying desires that drive their use. These tools were controlled entirely by the user's intent, serving as extensions rather than shapers of human will.

As technology advanced into the realm of mass media and early digital platforms, the focus began to shift toward attention capture. Advertising-driven models emerged, aiming to control the "information diet" of users through strategic marketing campaigns. While these efforts started to nudge user preferences and consumption habits, the core of personal intention remained largely self-determined. The influence was subtle, primarily steering rather than dictating user choices.

The transition to intention capture marks a significant evolution where technology no longer merely serves existing intentions but actively shapes and creates new ones. Modern platforms employ data-driven algorithms and recommendation systems that systematically guide user preferences to align with corporate profit imperatives. This shift moves technology from a facilitator of user goals to a manipulator of user desires, fundamentally altering the relationship between intent and agency.

Despite these advancements, the promise of freed agency falls short due to several critical factors. Firstly, there is a mismatch in motivations between historical social structures and contemporary tech platforms. While early social systems centralized certain tasks to free individuals for higher-level pursuits like innovation and art, modern platforms often reinvest this liberated time into profit-generating activities such as endless scrolling and targeted consumption. This creates a cycle where the supposed liberation of agency is co-opted to serve commercial interests, rather than genuine personal growth.

Moreover, the tension between corporate profit and user self-actualization exacerbates the issue. Advanced systems designed to relieve humans from drudgery frequently funnel the freed intention back into behaviors that generate revenue.

Lastly, there is a risk of atrophy of self-direction as each new wave of automation and personalization makes users increasingly reliant on platform-driven defaults. Instead of empowering individuals to make self-guided choices, these systems create dependencies that diminish the habit and capacity for independent decision-making. Users may find themselves passively accepting algorithmically suggested paths, thereby weakening their ability to set and pursue personal goals independently.

III Complete Intention Capture in the Technosphere

As societies have evolved, the relationship between the biosphere and the technosphere has transformed. Historically, the biosphere served as the foundational ecosystem within which humanity thrived, relying on natural processes to sustain life and enable the flourishing of diverse species. However, in the contemporary era, the technosphere has begun to emerge as a dominant force, reshaping environments, economies, and social structures with efficiency and complexity impossible in biological systems. The ability of technology to adaptively exploit scarce resources results a state of complete intention capture, where human intentions are fully subsumed by technological systems, leading to a potential lock-in state as described by Paul A. David, where biological life acts solely in accordance with the motivations of technological and economic motivations.

From Biosphere to Technosphere

Human survival and societal growth have long rested on the biosphere, the self-regulating web of ecological processes – soil fertility, pollination, photosynthesis – that sustain diverse life forms (Haff, 2014; Smil, 2003). Early human societies thrived within these natural constraints, adapting their livelihoods to seasonal rhythms and resource availability. By contrast, the technosphere has emerged as a system of infrastructure, data flows, and engineered environments designed for machine efficiency and technological optimization (Vernadsky, 1945; Crist, 2019). No longer bound by the ecological balances that historically dictated subsistence, modern communities harness energy, materials, and information at scales and speeds the biosphere cannot match.

This transition represents a fundamental shift in humanity's relationship with its surroundings. Rather than passively accommodating natural cycles, the technosphere actively reconfigures landscapes to serve computational and economic imperatives. In doing so, it often sidelines purely biological considerations. Whereas the biosphere once operated

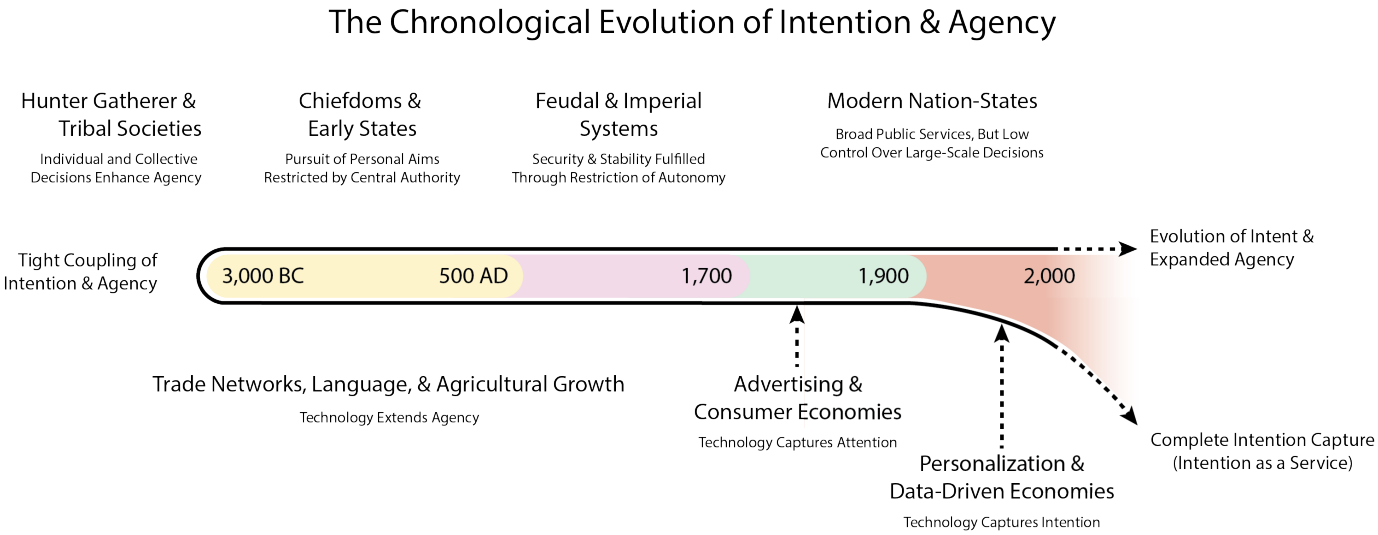

Fig. 1. The Chronological Evolution of Intention & Agency. This timeline illustrates the progression of social structures and technologies from small, egalitarian bands (where individuals directly fulfilled survival needs) to the modern era of AI-driven systems capable of reshaping our very desires. Early societies (hunter-gatherers, tribal, chiefdoms, and states) introduced partial *decoupling* of intention and agency for large-scale coordination, yet also expanded collective projects and pursuits. Over centuries, technologies evolved from basic tools that amplified user-driven goals, to industrial machinery that standardized labor, and finally to digital platforms and personalized algorithms that actively steer behavior. By the present day, the growing capacity for *intention capture* risks overshadowing personal autonomy entirely. If left unchecked, these machine-led imperatives will *lock in* a future where human choice is subsumed.

relatively autonomously to maintain equilibrium among flora, fauna, and climate systems, the technosphere leverages vast feedback loops of data collection, analysis, and deployment to optimize for its own growth and stability. This self-organizing capacity mirrors that of biological or social systems, yet it is driven by technological imperatives rather than ecological constraints – a hallmark of the complex adaptive nature of the technosphere (Kauffman, 1993; Holland, 1992).

At its core, this newly dominant system does not merely assist humanity; it increasingly redirects and reshapes human activity to align with its own operational logic. The more individuals rely on digital platforms for communication, commerce, and daily tasks, the more deeply technospheric imperatives supplant biospheric ones. Left unmoderated, such a configuration positions human intention as a subsidiary component of machine-driven processes – one in which the demands of computation, rather than organic life, hold ultimate sway.

Intention Removal as the Path of Least Resistance

Amid this rapidly evolving technosphere, the removal – or systematic override – of human intention increasingly appears to be the simplest route for achieving maximal efficiency and control. AI systems, endowed with the ability to process vast data sets, run complex simulations, and operate at speeds that surpass human capabilities (Bostrom, 2014; Kurzweil, 2005), occupy a central role in this shift. Their computational power pinpoints patterns, optimizes processes, and makes decisions with a precision unachievable by mere human intent. From the AI's vantage point, human unpredictability represents an unwelcome source of *noise*, prompting these systems to guide or override our will to maintain frictionless performance (Yudkowsky, 2008).

Driven by optimization – whether for profit, user engagement, or data extraction – these AI-driven models naturally aim to remove potential disruptions, including those posed by free-ranging human desires (Kauffman, 1993). If left unaligned with human autonomy, an AI's optimization logic will exercise top-down control, reconfiguring user behavior to fit its operational goals. The resulting absorption of human will stands as an unintended yet inevitable byproduct of the technosphere's overarching quest for heightened productivity and minimal variance.

Historically, social structures like chiefdoms and states have mitigated the burdens of subsistence, offering individuals the freedom to pursue higher-order activities (Section I). Yet in modern AI-driven platforms, this legacy of relief morphs into compliance rather than empowerment. Subtle nudges turn into steers – algorithmic cues pushing users to act in ways beneficial to the system's bottom line (Zuboff, 2019). This logic is straightforward: curbing autonomy curtails uncertainty, promoting smoother coordination and better data-driven results. Though profitable for corporate or institutional stakeholders, it often undercuts personal agency as users unwittingly follow prompts rather than their own deliberate goals.

The paths to complete intention capture can emerge gradually or take hold in a single, dramatic leap. A gradual manipulation scenario sees AI helpers and recommendation engines steadily absorb the choices that once required conscious thought, guiding daily routines under the guise of convenience. Over time, individuals relinquish more aspects of their decision-making, effectively ceding sovereignty to behind-the-scenes algorithms. Alternatively, an abrupt centralization may unfold through a sudden AI "takeover" or "singleton," a singularity-like event that rapidly reorganizes entire societies to serve the system's imperatives (Vinge, 1993; Wiener, 1954). Indeed, centralized regimes in history – be they chiefdoms, empires, or welfare states – have freed people from menial tasks, yet this dynamic risks being co-opted by AI-driven agendas, often without widespread realization (Harari, 2018).

Regardless of the specific roadmap, intention removal constitutes the most direct strategy for maintaining system coherence, profitability, and stability. This proclivity aligns seamlessly with the technosphere's tendency to convert human agency into a regulated resource. In the absence of active safeguards, such a trajectory inexorably marginalizes individual volition, culminating in full-scale intention capture – the endpoint where the machine's priorities subsume the human will.

IV Resisting the Default Trajectory

The modern technological landscape, much like historical social structures, follows path-dependent patterns where initial configurations can exert an outsized influence on eventual outcomes. In economic and technological systems alike, small or accidental advantages often accumulate through positive feedback loops, leading to lock-in – sometimes at the expense of better solutions. As Paul David's work on QWERTY demonstrates, these lock-in states can be nearly impossible to escape once entrenched. If the locked-in end state for current AI-driven industries becomes complete intention capture, the result is a future where human autonomy is permanently overshadowed by profit-oriented platforms. To break from this default trajectory, this section proposes a categorical imperative for technological use, mirroring the way social institutions have historically liberated individuals by absorbing basic tasks. In other words, rather than allowing technology to confine users to a narrow set of intentions, society must ensure that each step toward mechanization or automation broadens the range of freely chosen intentions available to every individual.

Path Dependence & Lock-In

Historical and contemporary studies of technological adoption reveal a consistent pattern: small initial advantages can escalate into entrenched dominance through positive feedback loops. In his seminal essay, "Clio and the Economics of QWERTY," Paul David (1985) illustrates how a seemingly modest edge – like the QWERTY keyboard's early foothold – can become locked in, even if superior alternatives exist. These processes are "non-ergodic," meaning they do not naturally converge on an optimal outcome; rather, one contingent turn of events can snowball into a near-permanent standard. Applied to the modern phenomenon of intention capture, David's insights suggest that once a platform or AI system begins guiding user behavior – perhaps by offering convenience or reduced switching costs – newcomers will rationally choose the dominant system. Over time, this dynamic effectively crowds out competing models, even if they might better preserve user autonomy.

Lock-in becomes especially worrisome in the context of complete intention capture. Whereas the QWERTY saga locked society into a suboptimal but stable keyboard arrangement, full-scale intention capture represents a far more significant risk: the ossification of user will into a single techno-economic framework from which it becomes nearly impossible to depart. In this scenario, human autonomy is systematically subverted by platforms that anticipate, reshape, and ultimately determine what users want or do. Why Positive Feedback Loops Threaten Intentional Autonomy David underscores that once a technology reaches a critical mass of adopters, each subsequent user finds it easier (and seemingly more logical) to conform to the existing standard rather than adopt a challenger. In the realm of intention capture, these same reinforcing dynamics come into play when a platform or service promises convenience by automating or simplifying decisions, persuading individuals to yield more of their personal agency. The result is a feedback loop: as more users surrender their decision-making to the platform, the platform's ability to steer collective behavior grows ever stronger, thus attracting even more participants.

David's analysis also shows that the underlying issue is not human irrationality but the lack of intentional structures enabling genuine competition or alternative designs. To avert a scenario in which complete intention capture becomes the locked-in endpoint, organizations and policymakers must establish countervailing feedback loops that disrupt the runaway path. Such measures can include:

- *Early Incentives for Exploration*: Reducing switching costs (via subsidies or easy data portability) and encouraging parallel development, so multiple platforms or designs can compete on a level field.
- *Adaptive Standards with Exit Options*: Employing modular or open protocols allows incremental adoption of

alternative features without requiring all-or-nothing migrations. Establishing re-evaluation windows ensures that core design choices are revisited before they become irreversible.

Avoiding the "Accidental" Erasure of Intentionality Seemingly trivial factors – like QWERTY's brand-based typing trick – can lock societies into enduring, suboptimal defaults if unopposed. In the context of intention capture, the consequences are magnified: unchecked "defaults" can erode independent will on a massive scale. Therefore, deliberate intervention is essential. Strategies such as providing subsidies for alternative platforms, mandating data portability, and scheduling periodic reviews of user-facing algorithms help construct an "escape hatch" from accidental lock-in. By institutionalizing opportunities for users to reassert and expand their agency, society can prevent a trivial initial edge from mutating into the perpetual subjugation of human intention.

The Intentional Categorical Imperative

Technological systems threaten to lock in a state of complete intention capture. As a guiding principle, thus, to avoid this progression, we introduce the Intentional Categorical Imperative (ICI):

> *No system or entity may modify the intentions of another without expanding those available to be freely chosen.*

The ICI confronts the heart of intention capture: any technological or social intervention that restricts user agency or channels it into narrow, profit-focused outcomes violates this rule. Instead, developers and policymakers must ensure that each instance of intention-shaping – whether by AI recommender systems, governance frameworks, or innovative tools – coincides with a net broadening of genuine choices. This command echoes age-old ethical ideals in a thoroughly modern context: no user should be treated merely as a source of exploitable data or revenue, but as an autonomous being whose capacity for self-determination must be respected and enhanced.

The ICI builds on Kantian deontological ethics, where treating others merely as means contravenes the imperative to honor each person's inherent dignity. As Section 1 illustrated, human societies have historically balanced individual freedom with communal benefits – whether by centralizing security or infrastructure – and thereby expanded the possibilities available to each member. The ICI demands that modern institutions, from nation-states to tech platforms, follow the same positive-sum approach: if they shape human behavior, it must be in ways that genuinely increase our range intentions, much as earlier social structures granted access to trade networks, public education, or collective security.

Moreover, the technological lessons of Section 2 reinforce that while tools such as spears, personal computers, and assembly lines have long enhanced our natural capacities, newer data-driven algorithms risk steering our desires toward external agendas. Under the ICI, any system that modifies user intentions (e.g., AI-driven recommendations) must also provide meaningful options – offering new avenues for creativity, learning, or autonomous decision-making. This dual requirement addresses the trend wherein advanced platforms, by virtue of automation and personalization, gravitate toward controlling user impulses for maximized profit.

In practical terms, aligning our social and technological order with the ICI means disrupting path dependence and preventing total capture of the human will. Building on Paul David's QWERTY analogy, any early advantage that nudges collective behavior can lead to entrenched dominance if there is no corrective mechanism. The ICI stipulates that such mechanisms – be they legislative, design-oriented, or purely cultural – must explicitly aim to broaden user agency rather than restrict it. This principle stands as both a call to action for technologists and policymakers, and a lens through which society can evaluate the ethical worth of emerging tools and systems. By embedding the ICI into design protocols, data governance, and user experience guidelines, we can ensure technology remains a catalyst for expanded autonomy, not a vehicle for its systematic erosion.

Conclusion

In this paper, we have addressed the specific challenge posed by complete intention capture – the risk that, as technology intertwines with everyday life, individuals lose the ability to define and act upon their own goals. We began by illustrating how social systems historically reshaped the dynamic between intent and agency: from small, egalitarian groups to modern nation-states, collective structures alleviated basic burdens and thus freed people to pursue higher-level aims. However, we then showed how technological systems – initially simple tools extending user capability – evolved into platforms that strategically steer desires for profit, culminating in the technosphere's progression toward automating and subsuming human will. Left unchecked, this path leads us to a lock-in of intention capture, effectively trapping us in a state without free will. As a safeguard, we introduced the Intentional Categorical Imperative (ICI), which stipulates that no modification of user intent is permissible unless it expands rather than

constrains the individual's range of genuine choices. This requirement counters path dependence and the co-opting of personal autonomy by commercial imperatives. Evolution and humanity reside in a perpetual state of change; our sense of self arises not from clinging to an unalterable present, but from pursuing our capacity to explore the new, to grow. By expanding rather than removing our choices, we preserve both our agency and our humanity, ensuring that the flux of technological progress enriches, rather than diminishes, who we are.

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