

Trojan Horses: Educational Re-mediations and Parental Responsibilities in the Age of Datification

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Abstract: This work employs the figure of Laocoonte, whose warning against the Trojan gift becomes a powerful metaphor to caution against the hidden dangers of digital transformation. Today, as then, a “Trojan Horse” lurks behind an appealing façade: technology that transforms every aspect of life into data a process defined as “datification” and that, as it evolves, shapes new identities, such as that of the “screen-ager,” where the screen becomes both a companion in growth and a tool for socialization. This very mechanism has led to the proliferation of smart devices (from the IoT to smart toys), capable of collecting personal data and influencing, from the very earliest age, the ways in which learning and interaction with the world occur. Such dynamics expose minors to growing risks: from privacy breaches as evidenced by the phenomenon of “sharenting” to the danger of online grooming, from deep fakes to cyberbullying, and even to the harmful effects of excessive screen exposure that can compromise emotional and cognitive development. Considering these challenges, the text calls for an urgent new culture of parenting and digital education. Only an approach that combines guidance, an alternation between digital and real experiences, and self-regulation in the use of technological tools can transform the seemingly innocuous “horse” into a tool for growth, protecting new generations and preserving their capacity to be active protagonists in the onlife world.

Keywords: Remediation; Sharenting; Datification; Parenting; Pedagogy.



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“Unfortunate citizens, is it such great madness? Do you think the enemies have departed?

Or do you esteem any gift of the Danaans free of deceit?

You know so little of Ulysses!

Are the Achaeans hidden within this timber,

or is this machine constructed to the detriment of our walls,

to spy on our homes and ambush the city from above,

or does it conceal another snare: Trojans, do not trust the horse.

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Whatever the case may be, I fear the Danaans even if they bear gifts."

Aeneid, Book 2, lines 40–50

1. Introduction

With these words, Laocoonte first a Trojan warrior and later a priest of Apollo urges his fellow citizens not to trust the Trojan gift, a suspicious horse, and indeed to destroy the majestic donation that would ultimately bring about the downfall and burning of great Ilium.

Centuries later, Laocoonte's warning still echoes from the virtual strongholds of the web. In a 1974 US Air Force report investigating potential computer vulnerabilities, one reads of new Trojan Horses: malware, the Trojan viruses, which deceive and, through the art of social engineering, manage to spy on an unfortunate user's computer stealing sensitive data and gaining remote access. Thus, the Trojan Horse becomes a new and effective narrative device for describing the transformations affecting education and training in the age of datification.

2. Re-mediating in the Post-Digital Era

The term *datification*, derived from the lexicon of data science, refers to the technological process that first transforms myriad aspects of social or individual life into data and then into economic information. A process that, over the past twenty years, has led to structural modifications in the political, economic, and social fabric, necessarily implying a re-understanding of the educational dimensions of interacting with technology.

A rhapsodic historical analysis of the transformations wrought by technology serving as a means of identification for generations (first bridging, then deepening the digital divide based on one's ability to use and the social value attributed to technology; see Cirilli et al., 2019) can be undertaken by examining the very names of the generations that, since the 1950s, have alternated until the emergence of Generation Alpha. The latter, composed entirely of 21st-century births, redefines leisure, work, personal, and social activities always in relation to a screen. In fact, the relationship with the screen has given rise to a new human form that, in Anglo-Saxon contexts, has replaced the prefix *teenager* denoting adolescents aged 13 to 19 with the prefix *screen-ager*, emphasizing the distinctive presence of the screen in an adolescent's life as they transition into adulthood (Tootell et al., 2014).

The phenomenon of the screen thus signals a redefinition of the nature of the technological tool: once understood as an artifact (Rivoltella & Rossi, 2019) a term generally denoting something produced by humans with a strong technical connotation it becomes a tool, endowed with a renewed nature that combines both the physical characteristics of the object and the subjective elements of its user, who develops usage patterns (Rabardel & Samurçay, 2001). According to Rabardel's instrumental genesis (1995), which distinguishes between *instrumentalization* the phase related to the emergence and evolution of artifacts and *instrumentation* the phase concerning the development of countless usage patterns one must reflect on the transition from mediamorphosis (Fidler, 1997) to remediation (Bolter & Grusin, 1999). These two phenomena define a relationship that is first technical-technological and then medial and hypermedia dynamic, fluid, fragmented, yet paradoxically

boundless and which might lead to a utopian (or perhaps elusive) cultural convergence (Jenkins, 2006), where even the very determination of the media proves deceptive.

While it is fascinating to attempt to definitively fix the nature of mediality and its associated transformations, it is now crucial especially in the aftermath of the pandemic to acknowledge the acceleration of digital transformation and the virtualization of every aspect of human life. This process, normalized, datified, and thus controllable (Foucault, 1975), extends even to bare life (Derrida, 2003), which, for the purposes of this discussion, refers to the bare life of a child in its first breaths and steps. Balbi (2022), paraphrasing Gramsci, reflects on digital technology as a form of cultural hegemony that imposes an interiorized universe upon society both horizontally, affecting all inhabitants of the network that now encircles the world (inside and outside the ecosystemic web; Capra, 1996), and, more importantly, biographically, from birth to death, and politically, reviving ancient dreams of dominion.

3. From the Trojan Horse to the Rocking Horse to the Colonialism of the Trojan

If the data market constitutes the new international trend allowing “the transformation of many aspects of our lives into data from which new forms of value can be extracted” (Cukier & Mayer-Schönberger, 2013) and managing to influence the entire sphere of international biopolitics (Ricaurte, 2019) and if in the virtual agora Big Data are capable of altering consumption modes in terms of volume, velocity, and variety, even reshaping, through the lens of data colonialism, a new Marxist spectrum of labor dehumanization (further alienating humans from the product that is their very life once it becomes entirely onlife; Floridi, 2014), and when, in this reflection, life becomes precociously and determinately exposed to the commodification of birth information (as seen in sharenting phenomena), then it is through the IoT – the Internet of Toys that the sales contract between man and machine, between child and smart object, becomes exceedingly dangerous.

This relationship no longer solely alienates human labor, tied as it is to products and their markets; starting from the child’s inherent disposition for play (Matteucci, 2020), the interplay between the child’s playful activity and the object now an intelligent one leverages the child’s active role in progressively constructing their world and, perilously, in constructing data, information, and images of their bare life. The Trojan Horse, which once concealed the Greeks’ deceit, now enfolds within its belly the lure of datification.

The Internet of Things (Holloway & Mascheroni, 2019) renders even Small Data biographical details on health, economic conditions, security that we unconsciously allow smart objects to datify, appealing, fascinating, and investable. IoT, smart objects, and mobile devices in the guise of toys, rendered in the most vivid and captivating designs can determine “kidfluence” (McNeal, 1969): the powerful ability of children to influence the market precisely through technology. Consider the “nag factor” – the incessant pestering that, within dynamics of indirect parental conditioning, compels the child to succumb to extreme media pressure aimed at acquiring a particular object; or the phenomenon of age compression, whereby the age thresholds for using an object are systematically lowered, so that a game or tool originally designed for nine-year-olds is promoted for even younger children; or trans toying, which transforms the very perception of a consumer object into play, simultaneously

adultifying the child and infantilizing the adult by captivating them with the object's engaging, fun dimension; and finally, dual messaging a promotional message operating on two levels, both to stimulate and persuade the child and to reassure the parent or adult.

With the advent of AI, the nature of the toy an object instrumental to human growth is redefined when it appears as an IoT device. Even though the transformation wrought by the IoT may not seem immediate when considering the 0–3 age group (despite pediatricians now warning of the dangers of digital interfaces), the definitive Trojan Horse is represented by learning machines. These machines, endowed with multifaceted artificial intelligence, manage to recast and challenge the very currency of human cognition. Artificial intelligence, positioned at the intersection of small and big data, encroaches upon one of the last frontiers of acquiring knowledge and understanding through thought, sensory experience, and lived experience: prediction. In re-modulating the operations of the human brain simplification, categorization, correlation, and substitution learning machines impose themselves as intelligent tools capable of operating within the infosphere alongside human brain structures, absent the symbiotic context of a situated environment, mediating interrelated small and big data in times and spaces no longer accessible to human capacity (Rivoltella & Pancioli, 2023).

Just as the Trojan was seduced by the Greek gift, so the adult is enchanted by the playful nature of the machine and the enticing (affordant) technological design (Gibson, 1979). Like Laocoonte who was overcome and perished, along with his sons, from the bites of sea serpents sent by Athena to thwart the revelation of Ulysses' deceit the parent is similarly ensnared, enveloped, and entangled in the coils of technology and its screens. Spitzer (2012) speaks of “digital dementia” in this context: excessive exposure to screens and digital media can lead to a flattening of emotional responses, adaptive capacities, and attentional as well as memory skills. Spitzer (2015) further expands the issue of digital dementia, envisioning a technological landscape in which society resembles a world without empathy, control, and vitality a world where man becomes a solitary digital being. The SARS-Covid 19 pandemic has pressed the accelerator on massive, forced screen exposure. Subsequent studies reveal that the venom of this technological serpent is strongly detrimental, leading to losses in emotional self-regulation and executive attention. Research on Effortful Control (Fitzpatrick et al., 2022) shows that heavy screen use during the pandemic among 3- and 4-year-olds resulted in a prospective reduction in their ability to self-regulate not only in attention regulation and in inhibiting or activating behaviors, but also in controlling or initiating behaviors that are functional to achieving goals or adapting to contexts.

Laocoonte's dying terror still haunts us. His cry calls for prudence (Rivoltella, 2024). The wooden horse now transformed into a screen that reflects the datified human in an infinite archive this time might not find a new, salvific Aeneas.

4. Old Priam and New Genii

There can be no new Aeneas if parental responsibility in the onlife Era often falters adults who, like adolescents, feast on social media; adults who lack the educational tools to stem the problem; adults incapable of recognizing the risks of the network's trap.

Take, for instance, the case of *sharenting* the excessive online sharing by parents of content concerning their children. Do you ever ask your children for permission before posting content about them? As parents, it is crucial to protect the privacy of minors; yet this does not always occur, as posting photos of one's children on social media has become a natural gesture for many precisely because "living online" entails no distinction between offline and online experiences. In recent years, there has been a significant increase in the number of photos of minors online. According to a 2015 study by the English association Parent Zone, a child appears, on average, in 195 snapshots uploaded by a parent each year and, by the age of five, will have been featured in about 1,000 photos. A study by Northumbria University shows that over 80% of British children are online by the age of two. Before the age of five, a child has approximately 1,500 photos on the web, and research commissioned by Parent Zone highlights that 32% of parents publish between 11 and 20 photos of their child each month. Moreover, 28% have never considered asking for their child's consent. Furthermore, several studies (Maxim, Orlando, Skinner, & Broadhurst, 2016; Steinberg, 2017) have shown that images shared online by parents are often found on pedopornographic websites, and that sharenting can facilitate ill-intentioned individuals in obtaining private information about the children such as addresses, locations, and daily routines. Such behaviors indicate a lack of digital literacy among parents who, albeit unintentionally, jeopardize their children's safety by publishing copious amounts of private information.

Expert Stacey Steinberg, law professor and director of the Center on Children and Families at the University of Florida, has provided UNICEF with important recommendations regarding sharenting. In particular, families should be cautious of several risks when sharing social content about their children:

- The potential misuse by other adults, which could harm minors or the parents who have chosen to make the content public;
- The improper use by some professionals, who might compile digital dossiers from images found on the web;
- The possibility that the photos could be illicitly repurposed.

Online grooming (or simply "grooming") occurs when an adult shows inappropriate sexual interest in a minor and approaches them online with the intention of initiating a relationship or arranging face-to-face meetings. According to Article 609-undecies of the Italian Penal Code, grooming refers to any act aimed at winning a minor's trust through artifices, flattery, or threats carried out via the internet or other communication networks to commit sexual offenses. The abuser might use the gathered pedopornographic material for various ends: luring other minors, selling it, or exchanging it.

Moreover, deep fakes videos that feature bodily and facial images captured from the Internet, reworked and adapted to a context different from the original using sophisticated algorithms are increasingly prevalent. It is easy to imagine how deep fakes could be used to damage not only politicians or celebrities but also ordinary people, compromising their reputation and credibility while fostering the spread of fake news. Additionally, issues such as internet gaming disorder, internet addiction, digital narcissism, social isolation, cyberbullying, and cyberstalking abound.

Aeneas, guarantor of future genius and possibility, embodies the new parental responsibilities that must navigate an education capable of inhabiting the infosphere

even when that education is evolutionarily profiled by digital and virtual elements. As the UNESCO Recommendation on the Ethics of Artificial Intelligence (2021) suggests, considering technology as one of the strongest cultural amplifiers, the goal is to conceive an ethics for managing the relationship with technology. This includes understanding the logics through which artificial intelligence accelerates and enhances knowledge in decision-making processes, as well as formulating an ethics of the criteria and principles that inspire technological development so that the use of AI results from choices imbued with responsibility and coherence with one's social, cultural, familial, and personal context. Even before school and in conjunction with it informed and competent parenting could serve as the primary arena for constructing a new human ethic capable of mediating not only between apocalyptic and integrated narratives but, above all, between the rights and duties of the screen generation.

5. Accompaniment, Alternation, Self-Regulation: Spears and Antidotes

With what weapons can Aeneas still save his genius? With what ships can he set sail and navigate the digital network without falling into the traps of ancient divine ire and without forfeiting his potential to be, once again, a city founder thereby granting space and time to future generations?

Beyond the metaphor, today's parenting, in the face of network risks, still has a chance for safeguarding; there remains the opportunity to discover in the digital screen a resource, even an educational one. It is imperative to decisively avert a media-free zone which, besides being anachronistic, risks consigning children to the lament of Aeneas who weeps, still unaware of his fate, for not having fallen with the other Trojans.

The recognition that digital technology is neither inherently good nor evil should drive authentic parenting (Lancini & Cirillo, 2022). For there can no longer exist a childhood or adolescence outside the relationship with technology; digital technology now represents the very core of daily life; screens must be understood within an appropriate pedagogical framework; and adults both within the family as parents and in educational or training systems as educators are the sole agents capable of resisting the spectral Marxist alienation and the datification of even the smallest aspects of life. Following Tisseron (2013), it is necessary to redefine strategies for media use and for controlling its effects on children:

- Accompany children toward a usage that is proactive, narrative, and creative regarding the screen free from algorithmic conditioning and market-driven definitions;
- Alternate digital use with real experiences and representations, thereby fostering methods of choice and critical evaluation of the tool in relation to the intended goal.

Self-regulate not only the temporal dimension of usage but also its consequent effects, to prevent the undermining of a child's abilities and actions so that, in the figure of Ascanio (Aeneas' son), the promise of a future still governed by human agency is not once again betrayed.

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