

From Military Simulation to Ludic War: A Generational Typology of the Mobilization of Play

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FOUR GENERATIONS OF LUDOLOGISTICS

War has always involved the mobilization of games and play, especially for the purposes of education and preparation. Ancient Chinese generals played Go to hone their strategic capacities; Prussian officers created *Kriegsspiel* to prepare for specific battles; U.S. Marines modded *Doom II* into *Marine Doom* to train squad tactics (see e.g. Lenoir and Lowood 2005; Peterson 2016). However, since the end of the Second World War, “playful media technologies” (cf. Frissen et al. 2015) such as videogames and simulators, but also smartphones, drones and autonomous systems, have enabled an expansion of the mobilization of play beyond the traditional realm of military simulation for training and planning. Inspired by Paul Virilio’s work on the role of cinematography in the “logistics of military perception, in which a supply of images would become the equivalent of an ammunition supply” (Virilio 2009, 1), I argue that play has been caught in a similarly logistical procedure, which I term *ludologistics*.

In ludologistics, the war machine systemically leverages playful techniques and media technologies in service of not just warfare as such, but also for the ongoing militarization of society and the construction of new war economies for NATO states and their allies. Thus play is made complicit in a project of permanent preparation for war that ultimately aspires to total civil-military integration, destroying critical distinctions like citizen/soldier and war/peace just as capitalism disposes with the distinction between work and play (cf. Virilio and Lotringer 2008; Wark 2007). My aim is to offer an overview of this growing effort to make play into a vector for militarism as a starting point for a critical analysis of its socio-political implications, by sketching out four forms of ludologistics that have emerged since the end of World War II.

The generational typology in Table 1 below shows how the mobilization of play has over time acquired new functions beyond military simulation (e.g. *Virtual Battlespace*), which notably has itself also begun to play new roles within the war machine. These include the militarization of civilian bodies and popular culture through interactive militainment (e.g. *Call of Duty*) and direct outreach to potential new warfighters through recruitment (e.g. *America’s Army*). Much has been

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written on the latter two forms, which are the output of the “military-entertainment complex” (see e.g. Crogan 2011; Dyer-Witheford and de Peuter 2009; Werning 2009) that was built during and after the Cold War, characterized by the reciprocal flows of funds, personnel and technology between the U.S. military-industrial complex and *inter alia* the videogame industry. In that assemblage of military, academic and commercial actors, the mobilization of play first became properly logistical.

The last stage, which I am calling *ludic war*, is the reorganization of military innovation according to playful principles of experimentation and creativity. This shift is known in military circles as “prototype warfare,” which “promotes moving away from a focus on the mass production of high-end weapons to the development, rapid fielding, and testing of prototypes in specific operational environments.” According to Marijn Huijink, this “experimental way of warfare” represents a method of staying ahead of geopolitical competitors while also recruiting “a diverse group of actors, including the military, tech start-ups, and venture capitalists, into experimental assemblages and informal partnerships” (Huijink 2022, 322–23, 327; see also Gould et al. 2024). These new civil-military assemblages are already visible in the United States, Ukraine, Israel and the Netherlands. Finally, ludic war also heralds the dissemination of playfulness and playful media technologies throughout the war machine, as evidenced by the rising prominence of autonomous systems, joystick-operated drones and smartphones on the battlefield, with far-reaching consequences for the conduct of modern war. The ludification of warfare thus asserts itself like never before.

| TYPE | DEFINITION | EXAMPLES AND KEY STUDIES |
|--|---|---|
| Military simulation, 1940s–now (or: first-generation ludologistics) | The armed forces’ deployment of analog or digital models and simulation platforms in order to prepare soldiers for operations, train specific skills, and/or aid strategico-political decision making. | Professional wargames, serious games, vehicle simulators (Ghamari-Tabrizi 2016; Hirst 2022; Losh 2009) |
| Interactive militainment, 1970s–now (or: second-generation ludologistics) | The transcoding of war into interactive spectacle by the videogame industry, aimed at managing player experience efficiently toward the cultivation of significant financial returns. | Commercial first-person shooters, recreational wargames (Lenoir and Caldwell 2018; Payne 2016; Stahl 2010) |
| Recruitment, 2000s–now (or: third-generation ludologistics) | The state-led production of interactive militainment as strategic communication, directed at gamers and other tech-savvy audiences. | Military esports, state-commissioned games (Allen 2017; Foust 2024; Nieborg 2006) |
| Ludic war, 2010s–now (or: fourth-generation ludologistics) | The playful organization of military-technological innovation processes, institutions and discourses, meant to stimulate the adoption of emerging technologies and promote new forms of civil-military integration. | Drones, military AI, smartphones (Ford and Hoskins 2022; González 2022; van der Maarel et al. 2023) |

Table 1: A generational typology of post-WWII ludologistics, including definitions, exemplary playful media technologies, and some key studies of those technologies.¹

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ENDNOTES

¹ The four generations are ordered chronologically, but the later forms certainly have not replaced their predecessors. Military simulation, for instance, is more widespread in its application than ever before, and interactive militainment remains an undeniably popular genre of videogames even today.