ISSN 2624-9081 • DOI 10.26034/roadsides-202200703

How to Play *Logistics Command*

Zachary Sheldon and Jack Mullee

In 1978, Westinghouse Electric Company published *Logistics Command* (*LC*), a board game that put players in charge of maintenance operations for a fictional nation's armed forces while teaching them the engineering principles that Westinghouse pioneered on behalf of real-world militaries. Although the game never caught on in its time, it resurfaced at a 2021 meeting of Logistics in the Making of Mobile Worlds, a research collaborative hosted by the Neubauer Collegium at the University of Chicago, where its complicated rules and clumsy components flummoxed several academics.

Since then, we have taken a closer look at how *LC* uses technologies common to gaming – such as dice, tokens, turn-taking – to simulate geopolitics in logistical terms. Our archaeology of gaming also reveals the techno-managerial philosophy of Integrated Logistics Support (ILS) that informed *LC*. Westinghouse pioneered these principles of systems design, which are still implemented at the US Defence Department, the UK Ministry of Defence and many aerospace companies. The ILS method sought to integrate all the minutiae of military preparedness, from circuit boards to helicopter maintenance schedules, into a holistic and easily controlled system – all watched over by a Westinghouse contractor. *LC* puts control of that system in the player's hands.

In this pen-and-paper game, we discovered an approach to managing complex systems that foreshadowed innovations usually associated with the advent of digitally mediated interfaces. By getting into the business of system design, Westinghouse roped the cybernetic imagination of the American military industrial complex to the accumulative strategies of management consulting: think of the Enterprise Resource Planning software that has become indispensable for businesses, or the proprietary logistics software packages that surveille and command contemporary supply-chain capitalism (Rossiter 2014: 58–59). Unearthing *LC* suggests that logistical forms follow their own itineraries, which can cut across distinct phases in the history of capitalism. At a moment when the era of global connections is giving way to renewed bipolar struggle, *LC*'s anachronistic depiction strikes us as timely once again.

To view images of the individual game elements, drag your mouse over the numbers marking each section below.

1 ***Game map:***

Through the medium of the game, Westinghouse Electric's logistical engineers make an argument about the world in which we dwell, and the problems we need to solve in order to keep on living there. The game map depicts two client states, the People's Republic and the Federal States, and their superpower sponsors, the Union of Red and the United Blue. Each player controls a client-superpower pair.

This set-up evokes Cold War polarities, but looks can be deceiving. The year 1978, when *LC* came out, capped off a decade-long decline in US military spending relative to GDP, and Westinghouse recognized that Washington had to justify new expenses. "The thing to avoid," wrote an ILS engineer in a conference paper published by the International Electrical and Electronics Engineers (IEEE), "is compromising the logistics implementation to save a few bucks" (Rasa 1978: 233). Employing ILS engineers would cost more up front, but by managing every element of project maintenance, from designing the test connectors on radar systems to writing the repair manuals for technicians, the ILS method promised to deliver savings over time. Note how this argument assumed that there would be a need for maximum military preparedness in the years to come.

2 ***Rulebook:***

LC's rulebook claims that "[t]he game leads the players naturally to the concept of integrated logistical support" (BGS 1978: 21). But to arrive at this harmonious image, players must navigate the *LC* rulebook's dense two-column layout, which is packed with so many abbreviations that you might mistake it for a real-life military document. The rulebook orientates players to the interrelationships of a war machine's many components, from spare parts to support centres, at the same time that it situates play in a turn-based geopolitical imaginary. Gameplay proceeds across sixteen turns divided into five phases each. Players do not take turns subjectively, as in most other board games, but rather jointly experience each turn as an objective event. Across the ensuing eighty moments of gameplay, players roll dice, crunch numbers and try to keep their war machines from falling into disrepair. There are no rolls to attack or defend because attacking and defending are not within the scope of player agency. Rather, dice are rolled each turn to determine whether a given military system will break down or be repaired (see 5: The Matrix, below). Players attempt to mitigate the impact of any single breakdown through failsafe planning and a healthy distribution of risk across multiple platforms, leading them to experience logistics as a resilient and adaptable whole that overcomes routine wear-and-tear in anticipation of the next crisis (see 6: Situation Cards).

3 ***Control Sheet:***

"System behavior is largely determined on the front end, before play begins," writes the game designer (BGS 1978: 21). In stark contrast to an emergent emphasis on flexibility and efficiency in 1970s commercial logistics – exemplified by the rise of Toyotism and just-in-time production – the Westinghouse ILS model demanded total foresight for military logistics. In *LC*, the result is a game world that feels doubly anachronistic: its logistics refuse both post-Fordist flexibilization and Bezos-style fulfilment-on-demand.

So, *LC* requires players to schedule all of their equipment 'orders' before the game even starts, by formalizing them on the Control Sheet. The Control Sheet incorporates an order delivery schedule that corresponds to the turn-based structure of the game: individual orders become ready at pre-specified turns, while existing equipment breaks down and gets repaired over time (see 5: The Matrix). *LC*'s rulebook suggests that players spend an hour or more planning their Control Sheets – before play begins.

Frontloading all the hard decisions does not make for a very dynamic contest. But it fit the bill for Westinghouse's marketing. As the IEEE memo explains, a project manager must "recognize the need for his ILS engineers at the very start and set up the basic ground rules that the ILS engineers are an integral part of the total engineering team!" (Rassa 1978: 233) By rewarding players who plan ahead and penalizing them for amending schedules during play, *LC* hammers this advice home.

4 ***Tokens:***

Players populate the game board with tokens depicting a range of combat equipment and support facilities. Each token is a hieroglyph teeming with numbers and other tiny symbols, all of which convey information about the strength and reliability of the equipment depicted. As gameplay unfolds and players roll dice, they add, multiply and divide these numbers to determine their war machine's performance in high-stakes 'situations' (see 6: Situation Cards). For our players, tokens seemed both clunky and ahead of their time – evoking anachronistic images of computer games that crunch these kinds of numbers automatically.

5 ***The Matrix:***

These tables show how die rolls translate into breakdowns and repairs, and provide space to track points, turns, repairs and expenditures. No part breaks down on its own. Instead, an unlucky roll will degrade the preparedness of all components that share a given Mean Time Before Failure (MTBF) value. Likewise, a single good roll will repair all eligible units that share the same Mean Time To Repair (MTTR). This makes it critical to acquire systems with a mix of MTBF and MTTR values – you do not want to get stuck with simultaneous breakdowns across the board, and service bottlenecks

will stop you from repairing everything at once. Healthy system behavior distributes loss and repair, maintaining aggregate preparedness for each moment.

Situation Cards:

Each turn of *LC* is dramatized by its first phase, in which players draw from a deck of Situation Cards. Most cards describe routine missions – e.g. "PEOPLE'S REPUBLIC patrol boats transport guerrilla fighters to base camp" – through which players gain or lose points with little immediate consequence. Other cards, however, depict 'crises' in which the game suddenly hangs in the balance. If a player's war machine cannot meet the numerical threshold of preparedness specified on the crisis card, the player is eliminated: game over. Here, existential Cold War anxieties are materialized in gameplay. *LC*'s all-or-nothing imaginary of geopolitics helps explain the refusal of flexibilized logistics – emerging among commercial firms by 1978 – on the part of ILS (see 3: Control Sheet).

Debriefing Logistics

At the Neubauer Collegium meeting in 2021, neither the People's Republic nor the Federal States achieved victory. The hour allotted for gameplay was not nearly enough for the assembled social scientists to design and execute an ILS plan. Instead, the two teams 'hacked' *LC*, twisting its rules and eschewing long-range foresight in order to get into *LC*'s world and play. Players embraced contingency and on-the-fly planning against *LC*'s formula of foresight, calculation and control. In its prescribed form, *LC*'s gameplay foreclosed opportunities for dynamic decision-making, counseling players to program their control sheets toward predictable outcomes. But our social scientists were not suited to holistic control. Competing in their own flexibilized styles in 2021, the Federal States and the People's Republic enacted yet another iteration of geopolitical logistics. Sadly, the reinvention of logistics for a belligerent geopolitics seems only too timely.

References:

BGS, Business Game Systems. 1978. "Logistics Command: Rules of Play." Designer: James R. Myers. Westinghouse.

Rassa, Robert C. 1978. "The Importance of ILS Considerations During Design." In *The International Automatic Testing Conference AUTOTESTCON '78 Conference Record*, 230–34. San Diego, CA: IEEE.

Rossiter, Ned. 2014. "Logistical Worlds." *Cultural Studies Review* 20 (1): 53–76.

Cite as: Sheldon, Zachary and Jack Mullee. 2022. "How to Play *Logistics Command*." *Roadsides* 7: 15-20. https://doi.org/10.26034/roadsides-202200703

Authors:

Zachary Sheldon is a sociocultural anthropologist and Teaching Fellow in the Department of Anthropology and the College at the University of Chicago, where he teaches a course titled "Games: Theory, Practice, and Experience." His research explores the intersection of migration, conflict and epistemology in the contemporary Middle East.

Jack Mullee is a sociocultural anthropologist and Teaching Fellow in the Department of Anthropology and the College at the University of Chicago, where he teaches courses in the "Global Society" sequence of the Social Sciences Core. He is a founding member of the Logistics in the Making of Mobile Worlds research collaborative.

Roadsides is a diamond Open Access journal designated to be a forum devoted to exploring the social, cultural and political life of infrastructure.

roadsides.net
editor@roadsides.net
@road_sides
@roadsides_journal

Collection no. 007 was edited by: Julie Y. Chu and Tina Harris
Managing editors: Agnieszka Joniak-Lüthi and Tina Harris
Copyediting: David Hawkins
Layout: Chantal Hinni and Antoni Kwiatkowski

ISSN 2624-9081

Cover design: Creative Direction Julie Y. Chu, Illustration Shahira Bhasha