

Parable of the Boy and the Steam Engine

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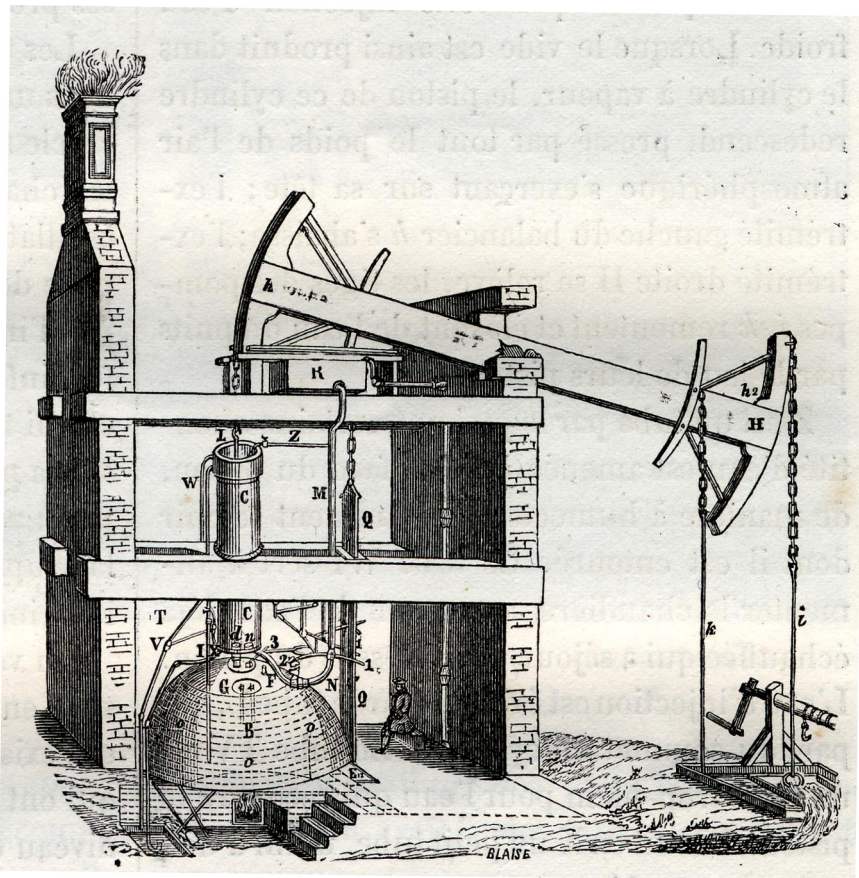


Figure 1: Thomas Newcomen's "atmospheric engine," an 1868 engraving copied from Desaguliers, *A Course of Experimental Philosophy* (1744)

1 Indolence

According to the parable of the boy and the steam engine, the dividing line between the “old hardware world” and the electronic age, to use McLuhan’s terminology, might be as tenuous as a simple piece of string. It goes like this.

One day in the early eighteenth century, a boy named Humphrey Potter devised a means of automating his job as the operator of an [atmospheric engine](#) with little more than a length of string. Day in and day out, Potter’s sole task was to open and close the engine’s valves. When he opened the inlet valve, steam was admitted to a cylinder, pushing a piston forward. Once the cylinder was filled and the piston extended as far forward as possible (at the “top of its play”), Potter would close the inlet and open the exhaust valve, releasing the steam and allowing the piston to return to its starting position.

A pre-industrial age version of Charlie Chaplin’s struggles to keep pace with an assembly line, the parable of the boy and the steam engine has a slightly different setup: the motions of Potter’s body were in fact an integral component of the machine process. Rather than indifferently ingesting his body if he fell out of step, the Newcomen engine could not function independently of its human operator. Without Potter’s constant on/off output, the engine would simply stop.

Eventually, Potter grew tired of hearing the laughter of other children playing marbles all around him while he toiled away at the controls of the engine. (For the purposes of the parable, the work to which the engine is applied is variable; these children conveniently set up their playgrounds at workshops, factories, or steamboats, depending on the version of the mechanical parable you come across.) Stuffing his hands into his pockets in frustration, one which held marbles and the other a piece of coiled string, the boy was struck by an idea.

Potter walked to the engine under his care and, using the piece of string, tied the inlet valve to one end of the piston and the exhaust valve to the other end. This way, when the piston reached the end of its stroke it would open one valve and close the other, allowing it to return automatically at each end. Potter’s modification of the newcomen engine created a continuous circuit, thus allowing it to run independently of human attention and creating the world’s first self-acting, or automated, mechanism. In this sense, much like Chaplin’s

Tramp, Potter achieves an imaginative realignment of objects that might oppress, bore, or exhaust anyone else. As Bazin writes in an essay on *Modern Times*, “Against their hostility Charlot also used a spiritual trickery: he found uses for them different from what fate had decreed.”¹

2 Ignorance

Potter’s act of amateur ingenuity has been used to demonstrate the operative principle behind a range of technologies, including the automaton and the cybernetic regulator.² The features of the parable – complexity of the result relative to the simplicity of means, the desire to extricate oneself from a task in order to save (or make) time, the superiority of human rationality within a technological process – express a form of interaction ripe for mythologizing. McLuhan cites the parable as a productive use of ignorance and indolence, a transformation of the desire to play into the invention of “the first automatic governing mechanism in the world,” linking it to the invention of cybernetics. This leads to the rather stunning idea that some of the most advanced fields of laboratory research might be superseded by the work of a bored child.

In one of his last public addresses, McLuhan asked what it would mean to stop trying to turn ignorance into knowledge, but instead to “organize human ignorance as a positive resource in this day of the mass audience created by electronic media.”³ He imagines a televised broadcast of the world’s experts on a range of subjects confessing their “hang-ups,” or what they don’t know, rather than lecturing on what they do. Like an early proponent of what we now call crowdsourcing, McLuhan writes, “to the untutored mass out there, all of the existing problems of the specialist are not problems at all. . . . Because there is always one man in a million for whom there is no problem. . . . The greatest inventions were made anonymously by nobodies; they simply used common sense.”

Rather than the breaks or paradigm shifts characteristic of McLuhan’s thinking

¹Bazin (2004)

²For several versions of this parable, see McLuhan and Staines (2003), pp. 292-293. Carnegie (1905), pp. 168-70. Beard (1914), pp. 3-6. The attachment of the valve to the piston or flywheel is known as a “plug tree device,” which was the first form of valve gear.

³McLuhan and Staines (2003), 292

(visual → auditory; sequence → instantaneity; Gutenberg galaxy → global village), “organized ignorance” is an “untouched resource” that might provide a kind of continuity: a technological grammar of common sense borne out of the “old hardware world of the nineteenth century” that would provide a new kind of “ratio” in the electronic age. It admits the possibility of small-scale solutions, creativity, and the rationality of the individual in an era of corporate R&D and increasingly black-boxed consumer technologies.

3 Productivity

According to the GTD school of thought on task management for knowledge workers, the trick to Getting Things Done is not to think about what needs to be done. Take all the inputs in your life – your emails, your grocery list, your ungraded papers, your missed calls, the notes scrawled on receipts in your back pocket – and run this undifferentiated “stuff” through the following [workflow](#). Is it actionable? If so, what is the desired outcome (review later, add to calendar, create reminder, delegate)? Be specific: What can I do? What can I do in the time I have? What do I have the energy to do? And so on. All the while, surprises and interruptions “must be evaluated against total work inventory and horizons of focus.”

Once your stuff has been catalogued, labeled, and described, once it has been transformed into actions and projects (the idea goes), you will be freed both to focus on the task at hand and to process each successive task more economically. Your overall productivity will see a significant rise and your mind will be unburdened from the stream of stuff competing for your attention. The irony of this algorithmic nirvana has not been lost on the movement’s founder David Allen, who [argues](#), “To simplify a complex event, you *need* a complex system.” Somewhere along the way, the tried and true genre of self-help has taken on the guise of workflow management.

One is tempted to enlist the parable of the boy and the steam engine as an object lesson for digital labor, an early industrial age lifehack that today remains as useful as ever. What better framework for digital labor than the simplicity of Potter’s binary on/off input? But contrary to McLuhan’s rare attempt to bring this wrinkle from the old hardware world in line with modern technological

concerns, ignorance as a [cultural technique](#) has variable effects depending on its application.

In the case of task management, what looks like saving time *through* laziness in the end produces the capacity for more work. Rather than outsourcing your labor to a machine by exploiting one of its inherent features (as did Potter) or crowdourcing that labor to a broadcast media audience (in McLuhan’s thought experiment), you’re segmenting yourself and your time. Your labor has become a machine you yourself maintain, a situation Jonathan Crary describes in his new book *24/7: Late Capitalism and the Ends of Sleep* as “the externalization of the individual into a site of non-stop scrutiny and regulation.”⁴ The brilliance of Potter’s automation lies in its simplicity, and this parable remains instructive for its failure to find purchase in the digital age.

4 References

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⁴Crary (2013), p. 32.