tech isn't coming to save us, FROM OURSELVES

Making the world a better place requires more than utopic solutionism.

Roman soldiers carrying the spoils from the Siege of Jerusalem (Arch of Titus, AD 82). This adaptation added the Boston Dynamic AI robot, an iPhone as a tool for editing genomes and the CERN LHC as a time tunnel (or STARGATE) taking us back to AD 82. Then and now, who is the oppressor and who is the oppressed?

Original author: Ehud Heller (medium.com/@EitanCapital)

Morozov (2014), which some consider the devil's advocate, rejected the term "cyber-utopianism" which has accompanied the Internet from its earliest days as liberating humanity from its bonds and changing the focal points of power between oppressor and oppressed (also "education of the oppressed" according to Freire). Morazov claimed for a trend that has taken a leading role among scientists and developers, where every problem - from air pollution to social gaps - has a mathematical solution. The same tendency for "solutionism" stems from a reality reserved for holders of privileges, which is largely disconnected from life experience of most of humanity and therefore ignores political, psychological, social, and incidental elements. Thus, much disappointing, the control of the oppressors remains, they are the "Master Switch" in the flow of information and the freedom to choose.

Douglas Engelbert was considered a "crackpot" during the 1960s, a promising scientist who decided that a stable workplace was not what he was aiming for if he wanted to make the world a better place. Years earlier, he had concluded that an increase in the complexity or the administrative intricacy of the solution of the problems facing humanity in social planning was inevitable. Rittel and Webber later described this as a "wicked problem". In 1968 Engelbert was

the first to demonstrate in real time a computer system that is remarkably similar to what we know 50 years later - a processor, an operating system with a graphical user interface, a keyboard, a screen, a computer mouse, a connection to a communications network and two people who talk and see each other using a camera and microphone. He gained fame and the world was no longer the same. This effect of what has been called "Mother of all Demos" is so evident in every area of our lives that we can no longer imagine an alternative existence. The team that developed the NLS (oN Line System) was scattered at prestigious research institutes and, as of 1973, it released the Alto, a commercial version of the NLS, whose rights of use have been acquired by Steve Jobs.

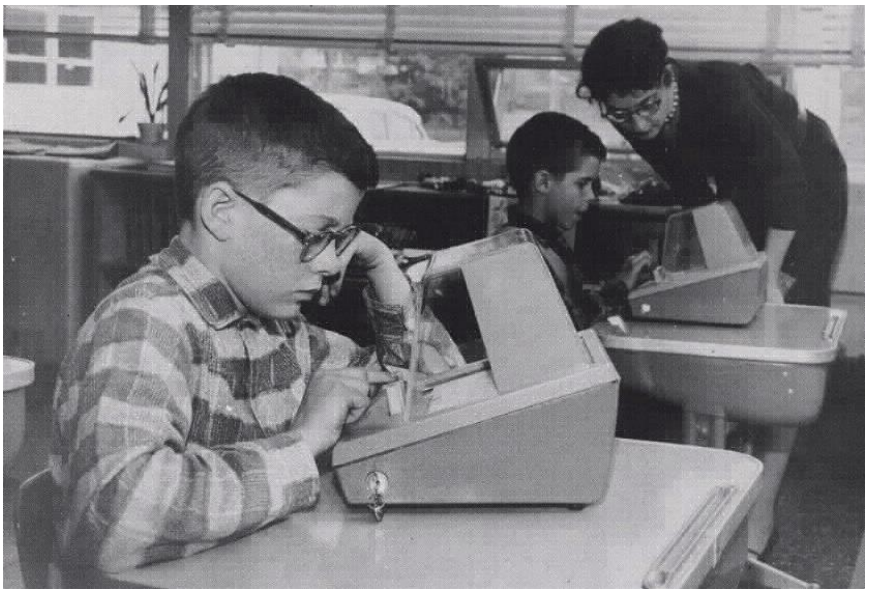
Douglas Engelbert with his 1968 computer at the SRI Augmentation Research Center

Engelbert, of course, did not invent everything by himself. A significant influence on his work is credited to a 1945 article by Vannevar Bush about a system for creating links between documents (later, this method became known as Hypertext, which underlies the Web) and to Paul Baran's work at RAND cooperation on Packet Switching. Baran subsequently published an article in 1967, in which he presented the "Future Computing Service", a national computer public utility system which will provide access via the telephone network to the residents' homes for services such as placing an order for the product if it is in stock in the desired size and color, paying bills, calculating taxes and more. But it was Engelbert who not only had the vision, but mainly the courage to undermine the consensus and implement a working prototype that connects all the small dots into one big picture.

Why the computer doesn't play any significant role in education?

The well-known psychologist Skinner (1961) tried to claim that the machine has a "dramatic" effect on motivation, since we are not required to wait for satisfaction, it comes immediately. The computer has all the advantages that since the days of the Athenian education system it has prayed for them: it always activates us, goes at our own pace, is at our disposal 24/7 and awaits to just being "harassed", able to transfer knowledge in a variety of ways, and never insults when you do not know. or carries out any manipulations. Decades after Skinner, his successors did not allow reality to confuse their enthusiasm for emerging technologies. Diane Ravitch, in her role as director of Britannica, painted an apocalyptic reality in which Little Eva's and young John curiosity is insatiable thanks to the "home learning machine".

It was 1988, and the year before, Apple CEO John Sculley introduced "Knowledge Navigator" as a personal digital assistant pre-SIRI but far more ambitious than her, even after 30 years. McIntosh and Gibbons also wore Nostradamus's robe for a moment and wrote about technology that will reduce the gaps in the distribution of resources and will fundamentally change the school. Thus, for 60 years, there have been no deviations from the same path that the deterministic and instrumentalist thinkers have chiseled, who attributed to technology the butterfly effect, in which even a small change can generate large changes independently of other variables. It was Postman (1993) who first began to escape from that Plato cave of an educational mirage with the sarcastic argument that it was not about a new technology but about a new breed of children who are yet to be born.



The B.F Skinner teaching machine and programmed learning (Mid 1950). Sidney Pressey was the original developer of the idea in the 1920th, But Skinner was the one who believed he can successfully apply operant conditioning to human learning.

Technology, in its manifestation as an electronic medium (computer, television, communication networks, etc.) has indeed changed the face of the human race and led it to an alternative development axis that is different from all its predecessors (time-shifting as Jodi Wajcman described), mainly because of the escape from the Malthusian trap resulting in the impact of the consumerism culture in accordance with the increase in the opportunities gap. Technology also led to the creation of new standards, social structures, workspaces, and economic competition that could undermine Keynes' prediction of technological unemployment in the labor market (1931), in a different way than the inventors themselves predicted. Wajcman brings the washing machine as an example of an invention that was supposed to liberate women from the enslavement to hours of tedious manual labor, but like the vacuum cleaner and dishwasher, generated a chain of events that began with awareness of bacteria and hygienic demands and resulted in more frequent use of these machines. So that a fundamental change in the well-being of women and the reduction of gender discrimination did not occur and the burden did not diminish.

Another case in the modern era is technology-based shared transportation companies in the US, Uber and Lyft, that have promised to reduce the number of vehicles. But, a fly in the ointment, they were so successful they encouraged people to prefer the convenience of consumption of the service they offer over public transport, walking, or pedaling. Our cities do not need more vehicles powered by electricity, but less of them. In a previous article ("If you are more of the same, then you don't have a say"), I have argued that the economy of venture capital funds prevents the development and even the invention of technologies for which there will be no investments. Here, also in this case, just a few start-up companies are engaged or are diverting resources to solve the issue of using public transportation because of lack of economic incentives that will make the field profitable. Grint and Woolgar argued that the tendency of investment funds to focus on the technological characterization of innovation allows only the "most appropriate" changes, which of course only "reasonable" people can offer (those that obey norms), to thrive.

In the same manner as these organizations and investment funds dictated Faux innovation, one that acts as a pendulum between continuous improvements as Miller (2013) described, with emphasis on "accessibility", "affordability" and "manufacturability", they also Ignored Paul Baran's warning in his seminal article on the need for regulation that would prevent companies such as IBM to become the master of private information. But before it was Adam Smith (1789), a prominent thinker in the field of economics, in his book "Wealth of Nations" in which he first

introduced the principles of the production chain, which tried to warn against the emergence of economic powerhouses that will effectively control government policy to the extent of creating such significant disparities of opportunities, that the theory presented by Jared Diamond in his book "Guns, Germs and Steel: The Fates of Human Societies" (1997) cannot explain.

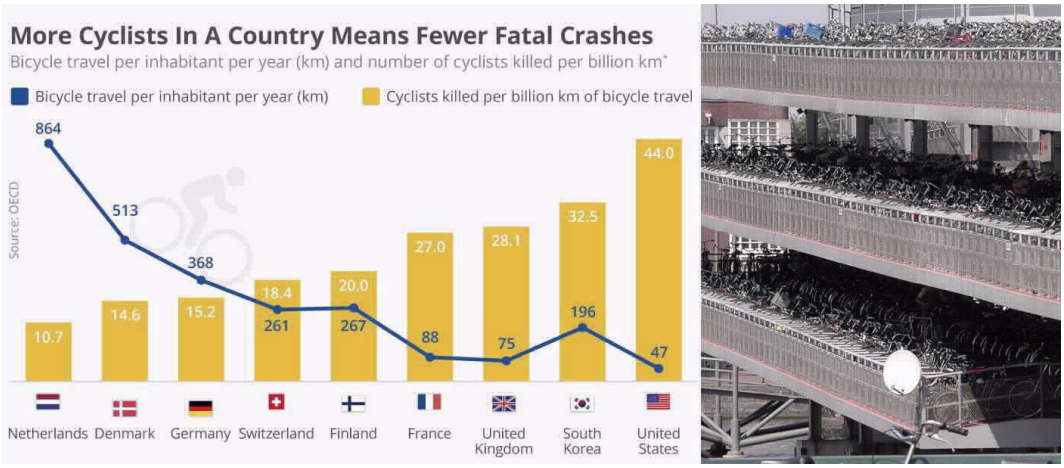
Who wags who

In the article "Beginning: The evolution of ideas," I wrote that technological systems are a product of the cultural environment in which they are developed and the problems it tries to answer. In other words, they are developed "within the box" and in advance dictate the desired result in accordance with the dictionary of concepts available to the thinkers of those technologies. But this is with reservation that there is no technology that will drive innovation in the face of a policy that derives and nourishes a given economy, which by the virtue of balance of power within it does not exert pressure for profound changes. Similarly, the existence of "breakthrough" technology is not a proof of innovation, and will only take place when entrepreneurs use technology for re-engineering, which is also reflected in a new business-operational model, with significant improvements in quality and cost reduction.

Professor Gabriel Salomon, in one of his fiery articles (2000), came out against the subjugation of technology by outdated pedagogy in the industrialist school as Fisk described it (or the reconstructed class in Weber's taxonomy). Garg, who served as Facebook's chief product manager, provided the economic angle that "companies that focus on delivering higher-quality educational solutions will not be able to succeed significantly than those who will work to reduce costs" (2011). The result - education systems that incorporated technology to a large extent, such as data-driven decision-making and personalized learning, did not succeed any more than those who did less, according to OECD research and others (2013, 2015, 2017). But this is true not only for education. In Amsterdam, for example, separate and friendly routes encourage 58 percent of the city's residents to ride bicycles every day, a significant achievement relative to other cities in the world that is not attributed to any technology company but to the activities of grassroots social movements.

In a country where oil and gas products are a major source of export, this change is not obvious. The boundaries of the social structures are those that do not allow the implantation of new technologies that can solve "wicked problems". Rogers (2003), who analyzed the characteristics of innovation and its agents of change, concluded that a diffusion of innovation occurs within

the framework of a social system in which the social structure, through its norms (culture and organizational climate), serves as a limit and a means of subordination to technology. Therefore, the result of the assimilation is all or nothing.

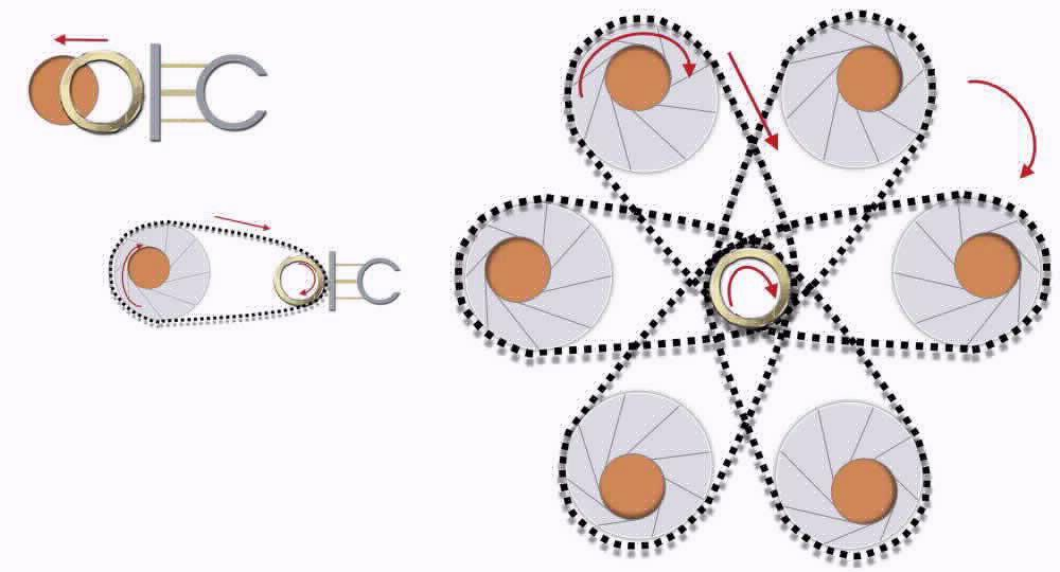


In paraphrasing James Carville, it is said that "It's the culture, stupid" rather than technology as a single component, that has the greatest impact on human development. In the above photo we notice one of the tens of thousands of bicycle parking lots in Amsterdam. Mazzucato advocates for "the entrepreneurial state" which without it many high-risk technologies would not have been funded, such as GPS and SIRI.

Innovation does not await secretly until it is time to be discovered, but rather is created from a chain of connections (and events), weak or strong, between agents, be they humans or artificial (such as artifacts or computational). Each agent (actor) translates and contributes his resources to shaping the final performance of that "black box" (the invention) wrote McMaster (1997). In order to understand why consumers prefer a product that seems to have less capabilities than its failed counterpart, why start-ups and ventures in general fail or that expectations from them are scaled down, we need to refer to the socio-economic context underlying the player-network theory, how stakeholders shape and add their version in a process of continuous transformation (Latour, 1996). Rogers called it "innovation translation" or "re-invention", which emphasizes the dialogue and the formation of support networks for technologies and products that have been able to take root and be woven into the economic and social fabric. This is similar to the gap between the waterfall approach (or a "bureaucratic organization" with a hierarchical structure that narrow the flow of information) and agile approaches (a "system model" of an organization that promotes free flow of information). Thus we escape from the "continuous improvements" pendulum towards a "transformative improvements" track, which is aimed at changing what we do and not just how we perform. Adopting a policy of open markets, as Kelly and Hess suggested for educational systems, is an example of improvements that can lower the barriers.

As the wheel spins

"Science is a cooperative enterprise, spanning the generations. It's the passing of a torch from teacher, to student, to teacher. A community of minds reaching back to antiquity and forward to the stars", wrote astrophysicist Neil deGrasse Tyson and sparked the imagination of many. In recent years, researchers have become aware that in order to understand biological phenomena, we must look at the continuum of the genome as a complex system of three-dimensional relationships, similar to how innovation is woven into the social network. The importance of this discovery, which leads us to the concept of "whole-system architecture", should not be underestimated. It offers a sustainable organizational function that requires that the technical, social, and economic components be coordinated with one another.



Eitan Capital's logo embodies the story of a complete metamorphosis: from the egg stage, through the larva to the wing layout and butterfly flight. It is the flywheel that drives a symbiotic universe as an ecosystem that is empowered by the number of actors involved. There is no artificial disconnect between the players, they act each for their own benefit and thus strengthen the prosperity of others. This ability draws inspiration from the natural sciences, in which there are genes common to all animals, especially those of the same species.

In the picture above (visit our YouTube channel and nextbignext.com), we illustrate the story we told above, small dots that are cluttered together with an "invisible hand" into one big picture. This is the Anticharta mechanism of Eitan Capital. The appearance of the metaphor "invisible hand" as Adam Smith described and Garg illustrated through the education economy, is not a coincidence. These points seek to connect not because of the general public welfare, but rather due to the altruistic interest inherent in the social mechanism rewarding in its messages those who reside within its shadows since "no man is a prophet in his own land", as Fromm described in his famous book "Escape from freedom".

In contrast to the hypnotizing light of the investment funds economy, which dictates in the name of "property rights" a rigid organizational and technological separation between start-ups, thus reducing the amplitude of the improvements made possible by synergy, we propose the model "Collective Dynamo for multi-agent feedback in an experience factory flywheel across product lines". This model is inspired by the "digital platform economy" that promotes the dissemination of innovation in open social systems, in an attempt to overcome wicked problems in the areas defined by public policy, such as housing, transportation, health, education, etc.

The solution that Eitan Capital promotes is multi-disciplinary and multi-dimensional in essence, allowing participation of all actors, from and within the organization, while each product, whether knowledge or expression of opinion or code adapted by a rule-based language, are all modular programmable building blocks that can be reorganized for different perspectives. This architecture encourages collaboration and exchange of knowledge in complex, multi-participant social systems that invite dialogue and reduce structural, cultural and social barriers that are essential for the implantation of new ideas while reducing risks at both the development and business levels. All of the projects initiated by Eitan Capital learn from each other not only at the level of development but at the level of end users, while ensuring the separation of commercial knowledge and tight usage control by the holders.

Addressing the critique on deterministic and instrumental approaches, in Eitan Capital's proposed model, any change done by a user, like butterfly wings effect, necessarily influences other players according to game theory and the network effect theory described by Vail and Metcalfe, towards the continuous improvement and lean manufacturing of ventures. Yet again we are witnessing the tremendous importance which began in our own genetic code that continues through the way we manage to assimilate products and approaches that undermine existing social, economic and organizational structures. These are the human face of the NeXT biG NexT for a better world, where we need more people like Engelbert.