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Law and Technology Realism

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One may identify two current trends in the field of "Law *and* Technology." The first trend concerns technological determinism. Some argue that technology is **deterministic**: the *state* of technological advancement is the determining factor of society. Others oppose that view, claiming it is the society that affects technology. The second trend concerns technological neutrality. some say that technology is **neutral**, meaning the *effects* of technology depend entirely on the social context. Others defend the opposite: they view the effects of technology as being inevitable (regardless of the society in which it is used).

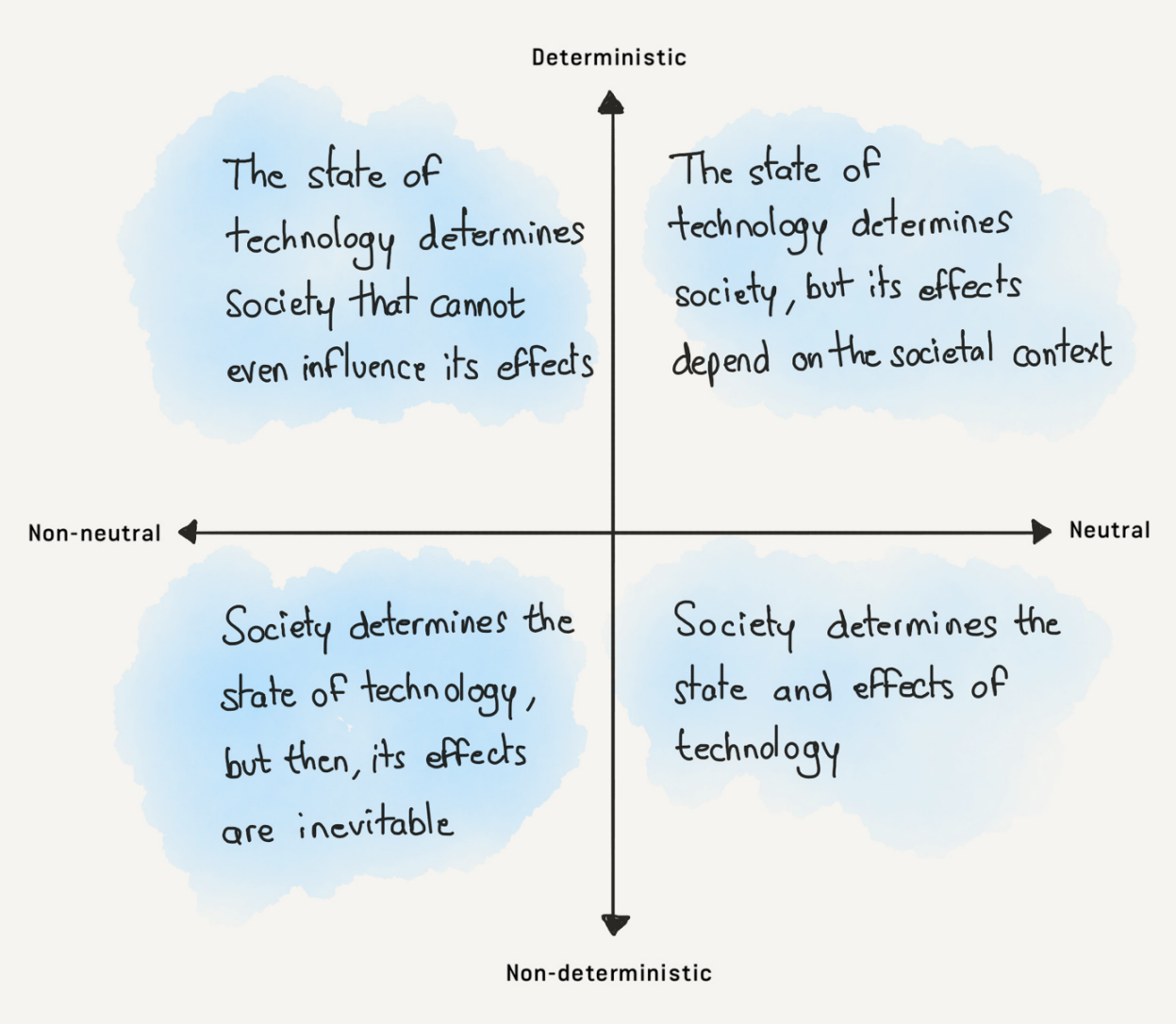


Figure 1

While it is commonly accepted that technology is deterministic, I am under the impression that a majority of "Law and Technology" scholars also believe that technology is non-neutral. It follows that, according to this dominant view, (**1**) technology drives society in good or bad directions (*determinism*), and that (**2**) certain uses of technology may lead to the reduction or enhancement of the common good

(*non-neutrality*). Consequently, this leads to top-down tech policies where the regulator has the impossible burden of helping society control and orient technology to the best possible extent.

This article is deterministic and non-neutral.

But, here's the catch. Most of today's doctrine focuses almost exclusively on the negativity brought by technology (read Nick Bostrom, Frank Pasquale, Evgeny Morozov). Sure, these authors mention a few positive aspects, but still end up focusing on the negative ones. They're asking to constrain technology on that sole basis. With this article, I want to raise another point: **technology** determinism can also **drive society by providing solutions to centuries-old problems**. In and of itself. This is not technological solutionism, as I am not arguing that technology can solve all of mankind's problems, but it is not anti-solutionism either. I fear the extremes, anyway.

To make my point, I will discuss the issue addressed by Albert Hirschman in his famous book *Exit, Voice, and Loyalty* (Harvard University Press, 1970). Hirschman, at the time Professor of Economics at Harvard University, introduces the distinction between "*exit*" and "*voice*." With *exit*, an individual exhibits her or his disagreement as a member of a group by leaving the group. With *voice*, the individual stays in the group but expresses her or his dissatisfaction in the hope of changing its functioning. Hirschman summarizes his theory on page 121, with the understanding that the optimal situation for any individual is to be capable of both "*exit*" and "*voice*".

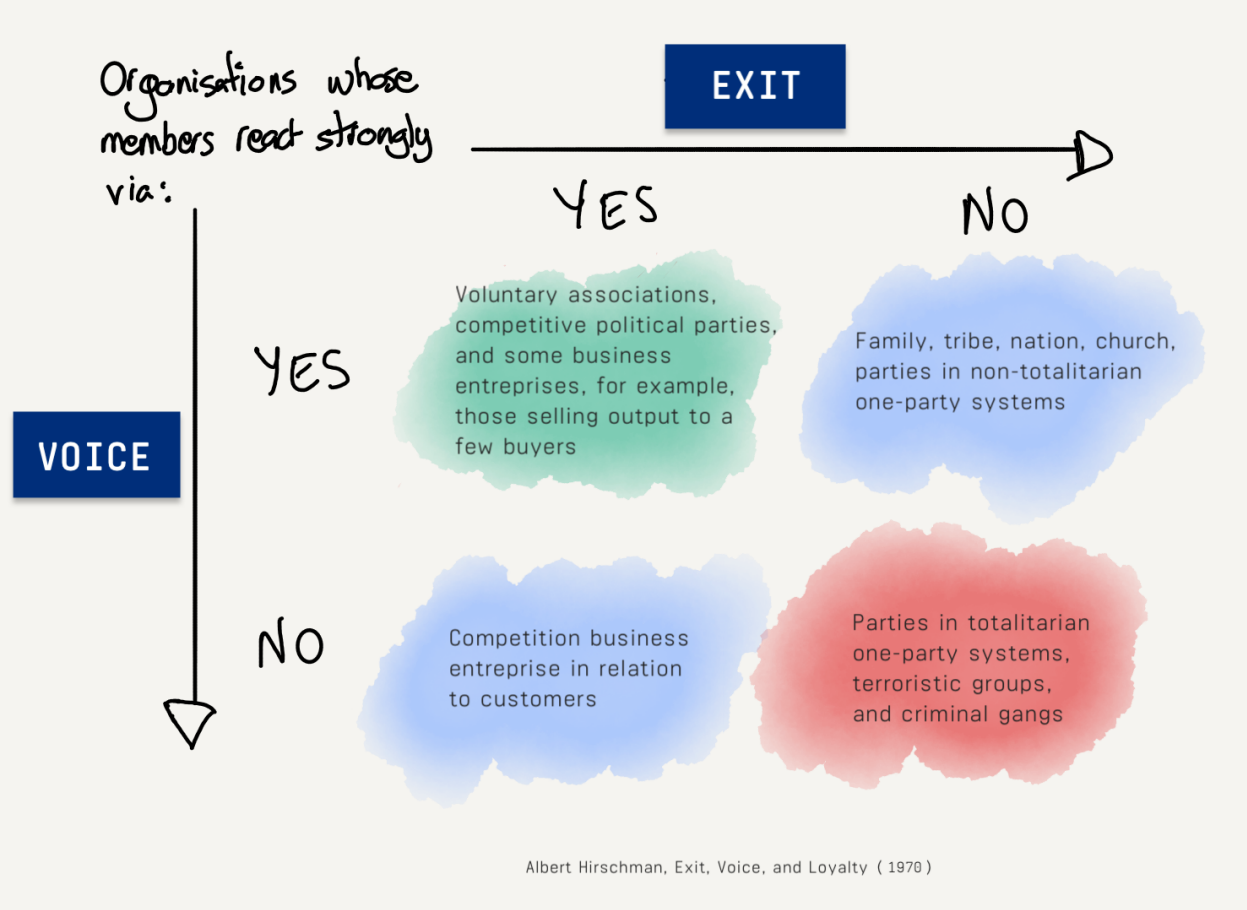


Figure 2

Two of these conclusions have become (at least partially) flawed as a result of technological advances made since the 1970s.

The *first* concerns the "*competition business enterprise in relation to customers*" group. On page 15, Hirschman holds that "*[t]he customer who, dissatisfied with the product of one firm, shifts to that of another, uses the market to defend his welfare or to improve his position; and he also sets in motion market forces which may induce recovery on the part of the firm that has declined in comparative performance. This is the sort of mechanism economics thrives on. It is neat–one either exits or one does not*".

In a world where buying products is expensive, the average consumer is typically forced to acquire only one. On the contrary, where products and services are free to the consumer, one may use several at once. The consumer may in fact compare their characteristics, and express her or his preferences through a temporary back and forth exit (what Hirshman calls "voice"), or through conventional voice mechanisms. This is called “multi-homing,” and it results from technological attributes (for instance, those of digital platforms) that allow for free products on one side of the market (generally the one where end-consumers are), and as a result, for cheap "voice" options where only "exit" was previously available.

The *second* concerns the "*family, tribe, nation, church, parties in non-totalitarian one-party systems*" group. Hirschman deplores the impossibility of leaving these organizations, underlining on page 117 that "*the decision to exit from the government of the most powerful country is particularly and deplorably infrequent. Why 'deplorably'? Because exit has an essential role to play in restoring quality performance of government, just as in any organization*".

As I sought to explain in "*Anarchy, State, and Blockchain Utopia: Rule of Law versus Lex Cryptographia*," blockchain's attributes allow for the creation of an ecosystem in which the rule of law cannot be enforced as easily as in the real-space. As a result, an individual may escape from the aforementioned groups, at least for certain digital activities:

> *[O]ne may argue that the coexistence of the two ecosystems will make it possible to evaluate the attachment that citizens have to each of their fundamental rights. Blockchain may indeed lead to life-size experimentation of the desire for the Rule of Law and Rousseau's social contract. To this day, citizens cannot "exit" the Rule of Law if they want to remain part of a democratic society. They have no other choice but to "voice," in other words, to repair the Rule of Law ecosystem. The same is true for citizens living under a different regime than a democratic one. The rise of Lex Cryptographia creates a new paradigm by offering citizens, at least for part of their activities, the possibility to "exit" the Rule of Law (or any other legal system imposed by the State) and to enter it.*

I hope these two examples demonstrate how technology is introducing additional possibilities to "voice" or to "exit" organizations. One can represent it as follows:

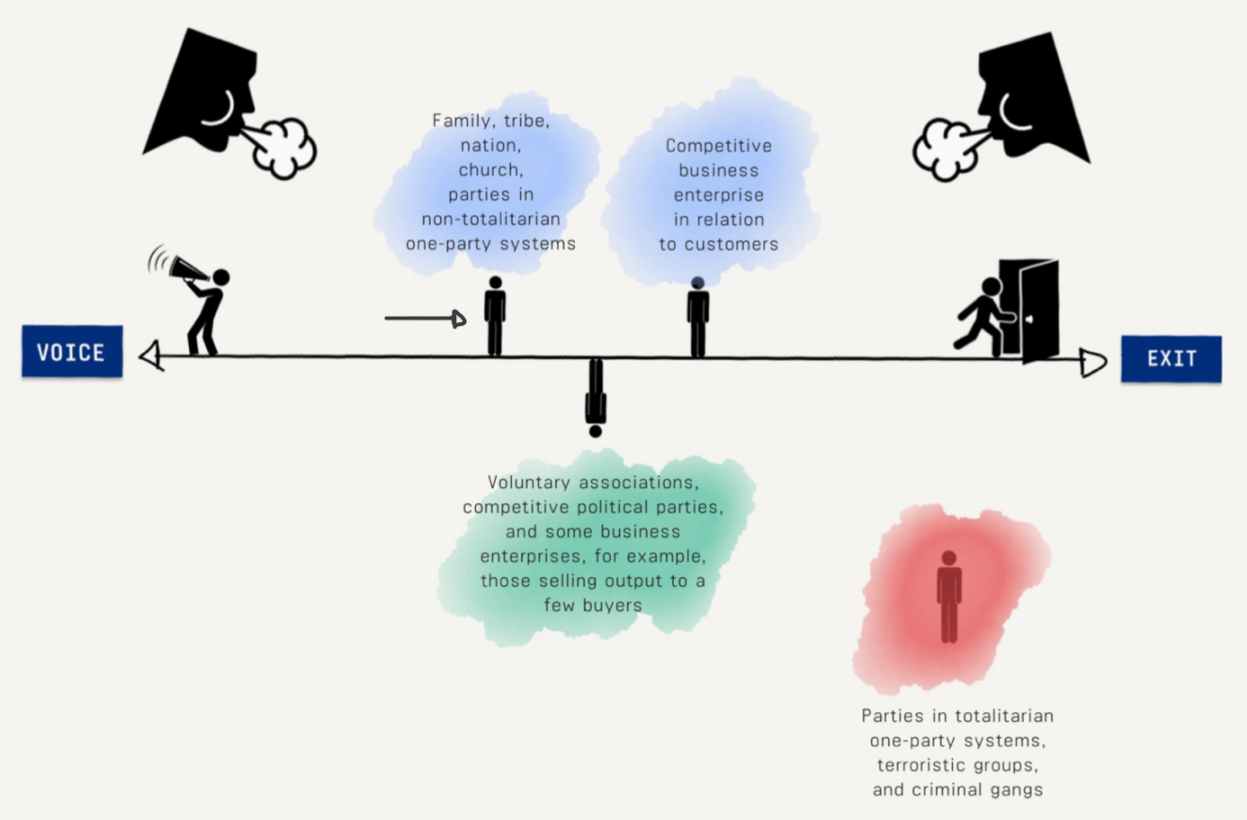


Figure 3

Of course, technology cannot solve all human issues. The lack of new solutions for "*parties in totalitarian one-party systems, terroristic groups, and criminal gangs*" illustrates this limitation. But the fact remains that (some) technology has the **intrinsic potential** to solve problems that are centuries-old.

To quote the late Jacques Ellul, "*[t]echnique carries with it its own effects, quite apart from how it is used... No matter how it is used, it has of itself a number of positive and negative consequences*." We may have forgotten the positive effects along the way. To remedy this fact, I encourage policymakers to be realistic, i.e., to consider *both* negative and positive effects of technology (instead of the 90%+ current regulations focusing only on its dangers).

Evidently, the negative aspects of technology should be addressed, but when doing so, one should make sure not to obstruct the positive effects along the way (or the least do so minimally).

For that, I propose the following methodology. Before enacting a regulation, policymakers should (**1**) gather all evidence on the subject they wish to regulate, starting with a basis that includes specialized press such as the MIT Tech Review or TechCrunch, and websites where tech communities can freely express themselves, such as Medium; (**2**) identify the positive effects created by the technology at stake, and whether they are deterministic and/or neutral; (**3**) do the same for negative effects; (**4**)

establish potential correlations between the positive and negative effects; and finally, (**5**) enact regulations that do not impede the positive effects, if there is indeed no correlation, or impede upon the positive effects as minimally as possible if there is a correlation.

Following this methodology will pave the way for evaluating different regulatory techniques in a new and novel manner. As Larry Lessig pointed out in his famous book *Code and Other Laws of Cyberspace*, the regulation of analog and digital subjects can be done through different combinations of law, markets, norms, and architectures. Let us assess in each instance which of these combinations best preserves the positive effects of technology. Sometimes, it will appear that combining law and digital architecture is producing outcomes that neither, on their own, could accomplish.

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