Programming the State—Digital Technology and Institutional Design †

Fredrika Lagergren

Department of Applied Information Technology, University of Gothenburg, 405 30 Gothenburg, Sweden; Fredrika.Lagergren@gu.se

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Abstract: During the last decades, the world has been going through major technological, economic and social changes. The evolutionary process has brought people together through flows of communication into global digital networks to an extent that scientists have started to talk of the rise of a new geological era called "Anthropocene". The paper "Programming the State—Digital Technology and Institutional Design" focuses on political aspects of the on-going technological transformation bringing us into a digital society. The aim is to discuss the relation between political and technological change by applying historical institutional theory to explain and understand how ideas and ideology are embedded into digital political institutions. The discussion starts by explaining the basic concepts used in historical institutional theory such as path dependency and formative moments. I then turn to a theory of history formulated by R.G. Collingwood, as this help to understand how the formation of political institutions may be studied in terms of a design process. My argument is that in order to understand the design of political institutions we have to include the study of political ideology since ideologies serve as the design plan for specific institutional solutions. If we are to understand the logic of digitalization we have to be aware of which ideas that are embedded into digital technological solutions. The presentation ends with a discussion on the implications that may be drawn by this argument and whether or not it is possible to turn back from a path once chosen to step upon.

Keywords: digitalization; institutionalism; political ideas; path dependency: formative moments; design

1. Introduction—Historical Paths and Critical Junctions

The notion that political ideas may explain how history takes a particular direction was mostly discussed among political scientists during the 1990s, as part of the rise of institutional theory focusing on the formation of political institutions and government. Historical institutionalism is a problem-oriented theory that circles around the existence of "social dilemmas" i.e., situations were individual's rational behavior lead to an outcome that is not optimal for society as a whole.

The term "political institution" has a specific meaning within institutional theory and it is used to describe many aspects of government:

By and large, they [historical institutionalists] define them as the formal or informal procedures, routines, norms and conventions embedded in the organizational structure of the polity or political economy. They can range from the rules of a constitutional order or the standard operating procedures of a bureaucracy to the conventions governing trade union behaviour or bank firm relations [1] (p. 938).

Institutions are, according to institutional theories, designed not only to conform to economic and social changes. They are also supposed to uphold commonly shared values of one specific

political community e.g., political ideas of a certain kind. In this way institutions serve as norms for the members of a society since they make it possible to act rational for each individual on behalf of the common good thereby solving "social dilemmas". In this way institutions guarantee historical continuity and predictability in both time.

Historical institutionalism is based on certain assumptions dressed up in metaphors such as *path dependency* and *formative moments*. Path dependency is a way to describe history not only as a chain of events leading to a certain development so that "one thing lead to another". It also gives an image of a route leading onwards and it has become a core concept in political studies in explaining historical continuance [2].

The concept of path dependency does not mean that history is determined so that the political institutions are never questioned or rebelled against. On the contrary, political institutions are robust only until external or internal evolution causes challenges and conflicts in a proportion that makes the path uncomfortable or inappropriate. As this happens the situation turns into a *critical juncture* recognized by major societal and political trouble. Thus, according to historical institutionalism, a critical juncture occurs when political institutions forming the path dependent order faces social, economic and political problems the institutions are not designed to cope with [3].

Historical institutionalism also uses the term "formative moment" to describe those particular moments in history. "Formative moment" is, however, not only to be regarded as a synonym since it is more directed towards political connotations of power and action than the sociologically based term "critical juncture" [4]. The concept of formative moments therefore, I argue, describes the role of human reason to interfere and create history more precisely than the term "crucial juncture" which is more of a historical situation.

2. The Uncovering of Meaning in History and Design

The image drawn by historical institutionalism—as it has been described here—gives a rather complex description of history where "explanans" and "explanandum" interact on a system level that also changes depending on whether you focus on a critical juncture, formative moment or on path dependency. There is, however a direction in time and space as the formative moment makes way for a path dependent movement in which institutions guide forward in history. Historical continuance is therefore to be understood in terms of path dependency starting and ending in an institution designed during a formative moment as a solution to take control of a situation i.e., a critical juncture where society is at risk. If we really want to understand history, then, we need to go beyond the actual facts e.g., institutional design, and look for the situation that caused this particular institutional solution. The study of history therefore has to be concerned with the meaningfulness of historical facts.

The British historian R.G. Collingwood argued in favor of an understanding of history that, instead of just describing or explaining historical facts, showed interest in the motives and driving forces behind the action taken by monument builders, generals and politicians [5,6]. The study of history should, according to Collingwood's theory, concern not only single historical facts about when and how something happened, but struggle to find out the meaning of and within the facts and artefacts i.e., why the buildings were erected and the battles were fought. To find this out you have to pay attention to not only the design of the artefact—or institution—but to the whole design process from ideas to construction and functionality.

The discussion regarding historical meaning as related to design processes are of much use if we are to understand the process of digitalization of societal institutions. The construction of digital political institutions follows the same logic of institutional building that characterized state building in other historical periods. If we are to understand and explain historical change related to digital technology—digitalization—we have to start by considering not only the digital institutions as such but why they are being built, i.e., what ideas are programmed into the digital state apparatus.

3. Political Institutions in a Digital World—the Evolution of Leviathan

In an article published in 2012, Orion L. Lewis & Sven Steinmo argue that historical institutionalism should consider a more holistic understanding of historical development instead of relying on rational choice theory assumptions of decision making. Institutions, they continue, should instead be regarded as evolutionary systems.

At their most basic cognitive level, institutions are sets of mental rules and schemas that drive our desires to reduce and replicate specific behaviors in specific contexts. Ideas perform the same function as mutations in biological systems—imperfectly replicating institutional structures in a way that generates new variation and hybrid forms of change over time. It is precisely the abilities of social animals, such as humans, to copy behavioral schemas and social rules that make complex social organization possible and endogenous institutional change more rapid than is often assumed [7] (p. 318).

Therefore, institutional change should, Lewis & Steinmo claim, be studied with tools similar to those used in evolutionary biology than by traditional variable oriented methods. Studies in evolutionary biology focus on systems analysis rather than experimental design where isolated parts are broken down into variables related to each other by the use of theories indicating causal mechanism.

The idea of explaining human behavior by referring to an intersubjective system level that is crucial to historical institutional theory may also be put in the light of the research conducted by Daniel Kahneman. According to Kahneman, human thought may be divided into two major modes: "thinking slow" and "thinking fast" and he refers to those two modes of thought as "System I" and "System II" [8] (p. 21):

- System 1 operates automatically and quickly, with little or no effort and no sense of voluntary control.
- System 2 allocates attention to the effortful mental activities that demand it, including complex computations. The operations of System 2 are often associated with the subjective experience of agency, choice, and concentration.

Kahneman's two systems of thinking may well apply to the same process that control our behavior on a societal level. Thus, they help explain how the metaphor "path dependency" illustrates the process that shapes history without falling into the trap of determinism or power. The theory also indicates what happen during a "crucial juncture" which may be regarded as the time when the "System 1" does not deliver.

Considering the political philosophy of Thomas Hobbes, the image of the State—Leviathan—is a creation of human reasoning, whose sole purpose is to guarantee a well-functioning society where people may live in peace and prosper [9]. In a digital world, a similar representation may be used to describe the need for a global communicative political power system. Therefore, if we as citizens of the world want to secure democratic influence and control over the political power as it takes a digital form, it is time to formulate political theories concerning the programming of a democratic digitalized state.

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References

1. Hall, P.A.; Taylor, R.R. Political Science and the Three New Institutionalisms; XLIV. In *Political Studies*; Blackwell Publishers: Oxford, UK; Cambridge, MA, USA, 1996; pp. 936–957.
2. Greener, I. The Potential of Path Dependence in Political Studies. In *Politics*; Blackwell Publishing Ltd: Oxford, UK; Malden, MA, USA, 2005; Volume 25, pp. 62–72.
3. Collier, R.B.; Collier, D. *Shaping the Political Arena: Critical Junctures, the Labor Movement, and Regime Dynamics in Latin America*; Princeton University Press: Princeton, NJ, USA, 1991.
4. Rothstein, B. *The Social Democratic State: The Swedish Model and the Bureaucratic Problem of Social Reforms*; University of Pittsburgh Press: Pittsburgh, PA, USA, 1996.
5. Collingwood, R.G. *An Autobiography*; Pelican Books: London, UK, 1944.
6. Collingwood, R.G. *The Idea of History*, revised ed.; Oxford University Press: Oxford, UK, 1993.

7. Lewis, O.A.; Steinmo, S. How Institutions Evolve: Evolutionary Theory and Institutional Change. *Polity* **2012**, *44*, 314–339.

8. Kahneman, D. *Thinking, Fast and Slow*; Penguin Books: London, UK, 2011.

9. Runciman, D. *Politics*; Profile Books, London, UK, 2016.