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Towards Contributions of Legal Scholarship and Economics to the Theory of Institutions

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Abstrakt

Elsewhere, the author dealt with know-how transfers to and from legal scholarship and economics. In the present article, he seeks to confront the two disciplines with a theory of institutions. Given that the key word *institution* is by and large associated with that of a *social rule*, his objective is to disclose it within the usual parlance of the Lawyer and the Economist. Expectedly, the Lawyer's concept of a legal norm is directly interpreted as nothing more or less than a specific type of social rule. By far less obvious is then the author's search for social rules inside the toolkit of economics. The author concludes that the Lawyer should propose to the Institutionalist to assign to every social rule (formal or informal) its Designer and Executor. Similarly, the Economist can suggest seeing the Designer as a decision-maker who, in the sense of textbook economics, selects an optimal social rule sr^* from a set of variant social rules $sr_1, sr_2, sr_3, \ldots, sr_N$. Hence, the author also suggests how the natural language of social scholarship could be replaced with more formal vehicles of communication.

Klíčová slova

Social rule, institution, preference, constraints, maximization, obligation and its condition

Introduction

This conceptual paper aims to bridge the realms of legal scholarship and economics with institutional theory, focusing on the concept of social rules as perceived by the Institutionalist. Building on the insights presented in Tříska (2017) and Tříska (2021), our goal is to unravel the complex relationship between legal norms and social rules in the discourse of both lawyers and economists.

The main goal is to show that a legal norm can be interpreted as a specific instance of a broader set of social rules. We intend to reveal the presence and implications of social rules within the economic framework through a thorough examination of the Economist's toolkit. Our investigation has resulted in significant recommendations for both disciplines.

1) Lawyers may propose the assignment of Designers and Executors to any social rule, emphasizing the importance of institutional roles and responsibilities.
2) Economists are inclined to view Designers as decision-makers who select optimal social rules from a set of variants, introducing the dimension of economic decision theory into the discourse.

This conceptual-methodological approach involves representing variant social rules and preferences through mathematical expressions, providing a structured framework for decision-making. The formalized exercise, MAX-M, serves as a tool to document the selection of a social rule based on preferences and feasibility constraints.

Furthermore, this paper investigates the consequences of imposing a chosen social rule, looking into the dynamics of power relationships and hierarchy within a system of social rules. It raises serious concerns about individuals' ability to exert influence over others and the consequent imposition of adjacent social rules.

Finally, by presenting MAX-M as a universal structure applicable to various contexts, the paper contributes to the understanding of institutional change. Within the framework of feasible social rules, the classification of institutional changes influenced by technological advancements and administrative developments is investigated.

This paper provides valuable insights into the interdisciplinary exchange between legal scholarship and economics, shedding light on the shared and distinct perspectives on social rules. It contributes methodological tools and theoretical frameworks that improve our understanding of decision-making processes and power dynamics in institutional settings.

Social institutions

In addition to the traditional disciplines of social scholarship, new ideas and analytical methods are being corroborated under the label of an *institutional theory*. However unstable its structure and scientific underpinning may still appear, a relative agreement can be seen as to the key questions under its study, namely, what are the origins of specific emergent institutional settings—their persistence and change—and, in particular, what institutions are?

In the present article, we will almost exclusively focus on the latter topic. Drawing upon our monograph Tříska (2017)[1] we will elaborate on a rather counter-intuitive or even improbable proposition that legal norms, as discussed within legal scholarship, are institutions of a genre akin to the demand/supply functions introduced by text books of economics.

This rather unexpected methodological bridge between the Lawyer's and the Economist's enterprise is believed to open promising ways on how to dig deeper into the core of the somewhat unclear concept of institutions and their variant settings.

Moreover, based upon the two perspectives of social choice and behavior, the Lawyer's and the Economist's, we will also comment on the advantages and disadvantages of their respective means of communication, differentiated—for want of a better term—as *narrative* and *formalistic*.

Illustrative definitions

The Institutionalist has by and large adopted Douglass North's (1990, 1993) definition that *Institutions are the socially devised constraints that structure human interaction – affect the incentive structure of societies and specifically economies.* In line with another Nobel Prize awarded Institutionalist Olinor Ostrom (2009), the term "constraint" is used interchangeably with the word "rule".

Jupille and Caporaso (2022) then dare expand North's definition so that *Institutions are intertemporal social arrangements that shape human relations in support of particular values.* In detail, they then elaborate on the terms intertemporal, social, and arrangement, to shape human relations, in support of particular values.

The two authors also refer to Alfred North Whitehead's observation that social institutions are *institutionalized* social rules, or the rules that have *managed to entail a*

[1] In what follows, we will consistently refer to the monograph by the word "elsewhere".

constitution of a set of important operations that members of the community can perform without thinking about them.

To conclude, Paul D. Bush (1987) argues that *a society may be thought of as a set of institutional systems. An "institutional system," in turn, may be thought of as a set of institutions. An "institution" may be defined as a set of socially prescribed patterns of correlated behavior.*

A social rule as a problem-solving strategy

Major theses

Our contribution to the debate will fully confine itself to the notion of a social rule in its own right, e.g., regardless of whether or not it has been institutionalized. In a nutshell, our proposal will be based on the following theses:

1) To a social rule, we will assign its Designer and Executor, where:
   - a Designer will be said to impose a social rule upon an Executor,
   - so as to affect (constrain, shape, regulate, coordinate, stimulate, etc.) the Executor's behavior,
   - with the aim of resolving a Designer's particular *problem*.

2) A social rule, as any rule indeed, has its universal *IF-THEN* structure, where:
   - the *IF*-component defines a set of *conditions*,
   - the *THEN*-component is assigned the empirical meaning of the Executor's *obligation*.

3) A social rule represents a Designer's belief that through it his or her particular problem can be resolved; his or her design of the rule can thus be taken as his or her *strategy* for resolving this particular problem.

4) A strict border line is drawn between the notions of a choice and a behavior, where:

   a *choice* will be established at the *epistemological* level of the analysis, specifically to conceptualize a Designer's selection of his other problem-solving strategy,

   a *behavior* will be established at the *ontological* level, specifically to describe the Executor's realization of a Designer's problem-solving strategy.[2]

[2] The strict differentiation between the ontological and epistemological levels is due to Lawson (1996).

Specific and peculiar Designers

Elsewhere, of our specific interest, came the cases where:

1) in the roles of a Designer and Executor is the same person, i.e., the cases of *self-imposed* social rules, often referred to as Designer's objectives, plans, goals, etc.
2) Designer is characterized as *divine*, e.g. a Designer of:

    - laws of nature (gravity, electro-magnetism, etc.),
    - informal social rules such as customs, traditions, norms of behavior, conventions, self-imposed codes of conduct, etc.

3) a Designer is of a *collective* nature, e.g., a firm, a household, a parliament, etc.

Epistemological reductionism (idealization)

It is commonplace in science to focus on the simplest arrangement of the system under study, regardless of whether or not it may exist in reality. In other words, reality is "idealized" to make the analysis feasible at all.

With the aim of shedding light on the infinite complexity of any real-world Designer-Executor relationship, we will sometimes find refuge within an idealized setting constituted by two and only two natural (physical) persons, identified by their as-if-unique names, Mary and John. Further, this institutional setting will be taken as elemental if:

1) Mary, and only Mary, is in the role of a Designer,
2) John is the only person designed by Mary as an Executor,
3) there is no uncertainty about:

    - Mary's entitlement to impose a particular social rule upon John or to affect (constrain, shape, regulate, coordinate, or stimulate) John's behavior,
    - John's knowledge of what has been imposed upon him,

4) John's behavior is always fully consistent with the imposed social rule.

The latter characteristic is of prominent interest to the Lawyer, whereas the Economist by and large, abstracts from situations characterized as a social rule's *breach*.

The Lawyer's conceptualization of a social rule

A legal norm as a social rule

Hypothesis, disposition and sanction

It is commonplace in legal scholarship to constitute a legal norm (a social rule) as a triad *hypothesis*, a *disposition*, and a *sanction*. Drawing on our proposal of the universal (*IF-THEN*) structure of a social rule, the *IF*-component corresponds to a *hypothesis* (a "legal condition"), whereas the *THEN*-component is what the Lawyer would call a *disposition* (a "legal obligation").

As to the *sanction*, it should be rather viewed as a social rule of its own right, characterized by the fact that its *IF*-component entails a *breach* of some other social rule.

The Lawyer's classification of obligations

The *THEN*-component of a social rule —John's obligation—is often differentiated as:

dare	to give,
facere	to act,
omittere	to forbear,
pati	to withstand.

Elsewhere, we have decided to stick to *dare* or *facere* only and interpret both terms as a delivery of some *valued asset*. To illustrate, the *forbearance of grass cutting* on Sundays has been assigned, as its true content, an obligation to deliver *peace and quiet* on that day.

A legal obligation's time and space

As it is our aim to compare the Lawyer approach with that of the Economist, we will pin point that among the substantive attributes of a legal obligation, we will find not only *kind* (e.g., bread, wine, money, etc.) and *magnitude* but also *location* (e.g., Prague, Moscow, London, etc.) and *time* (e.g., in two days, tonight, as soon as possible, on June 15, 2077, etc.).

The Lawyer's concept of an obligation thus immediately brings to fore an instruction on *how* exactly the valued asset must be delivered.

In economics, the location and time attributes are often characterized as *non-economic* by and large due to the absence of their express price tag.

A social rule's growth

For the Lawyer, it is more than usual to speak about an obligation's stages. Elsewhere, we have introduced a finite set of four such stages, broadly characterized as:

conceptualized	created or emerged,
designed	obtained as an outcome of the Designer's choice,
prescribed	brought about as an outcome of transition from a stage *designed* – in the specific form depending on whether and how exactly conditions are satisfied,
completed	*fulfilled or breached.*

Hence, the same stages can and should be assigned to a particular social rule, and the rule's growth should enrich our vocabulary.

Persons and their roles

An agent vs. a person

It is commonplace for a Lawyer to see a given person in different social roles as different agents. For that matter, it is usual to identify the agent.

Invoking the elemental setting, Mary-the-Designer will be seen as different agents if taken as a mother of two, a driver, or a policewoman.

In different roles, the same Mary will be capable of interacting as if with herself, e.g., in the case when she decides to impose some social rule upon herself. For dramatic effect, we may let Mary-the-Policewoman arrest Mary-the-Driver for her own drunk driving.

A Beneficiary of a social rule

Unheard of by the Economist is the setting where Mary imposes a social rule upon John in *favor* of "third persons", e.g., Charles, her son.

As a so-called Beneficiary of the social rule, Charles is defined by his exclusive right to demand fulfillment of John's obligation. In other words, John is not "allowed" to launch the fulfillment unless it is demanded by Charles.

Social rule vs. social principle

It is common for the Lawyer to differentiate between legal rules and principles. Rather unexpectedly, we will comment on the two concepts in the following "economic" section.

The divine tenth Commandment, *Thou shalt not steal*, will be impliedly confronted with the obligation to maximize profits imposed upon a producer by the Invisible Hand of the Market.

About the search for social rules in Economics

As envisaged, a social rule, a legal norm, and a demand-supply function will be introduced as concepts of the akin genre. To begin with, a few notes may be of value on how a social rule may be expressed formally.

Formalistic representation of a social rule

Domain and co-domain (range) of a social rule

The universal *IF-THEN* structure of any rule (law of nature, legal norm, convention, etc.) can be, in principle, designed in the form of a mathematical function (Equation 1):

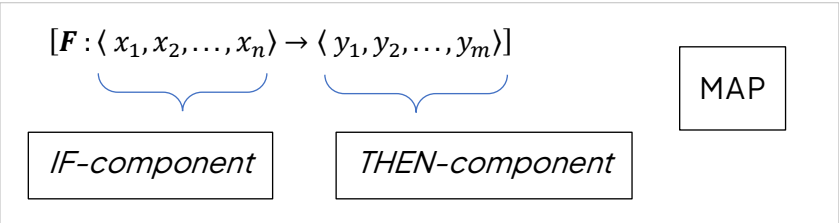
$$(y_1, y_2, \ldots, y_m) = \boldsymbol{F}(x_1, x_2, \ldots, x_n) \qquad (1)$$

where:

- $x_1, x_2, \ldots, x_n$ represent independent (input) variables, by and large interpreted as "conditions",
- $y_1, y_2, \ldots, y_m$ represent outcomes under study, including the Executor's obligations.

To represent the rule's *IF-THEN* structure more clearly, we will now re-write it in its more accurate form – as the mapping MAP below (Figure 1).

Figure 1: Rule's IF-THEN structure



In terms of mathematics, the left-hand side of MAP is a *domain*, whereas on the right-hand side is a *co-domain*, or *range*.

Clearly, a domain and a range are just different names for the Lawyer's *hypothesis* and a *disposition*, or for what the Philosopher would characterize as an *explanans* and an *explanandum*. The Economist would often differentiate the two sets of variables by the adjectives *exogeneous* and *endogenous*.

Operationalization of the mapping

The formula MAP would remain empty unless concrete contents were assigned to every single variable and the operator *F* – unless it was operationalized. The only way to do it is to consider MAP in a specific institutional setting—to consider its Designer as resolving an extremely specific social problem.

In the particular case of economics, the Economist confines himself to a self-contained social system called the *economy*. About this system, the Economist further asserts that it consists of two and only two categories of inter-acting agents, namely a so-called producer (a firm) and a consumer (a household). For the floor of their interaction the Economist coins the term *market*. With the aim of further operationalizing the MAP, the Economist introduces diverse *market structures*—monopolistic, oligopolistic, etc.

To every such structure, the Economists then assigned a specific category of producer and consumer and the respective categories of social rules imposed upon them. Thus, operationalizing two types of MAPs, the Economist coined the terms consumer's demand a producer's demand and supply functions.

Institutional setting of a production

A producer under the social rule of perfect competition

As this article seeks to be purely methodological, we will dare confine ourselves to only one of the two economic agents, namely a producer (a firm), for concreteness represented by the firm's CEO, named John.

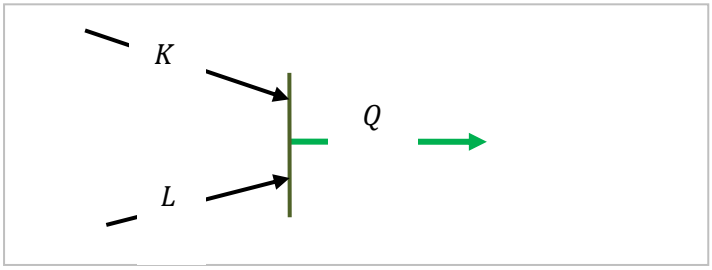
Moreover, from among the variety of market structures, we will confine ourselves to a market broadly characterized as perfect competition and accept that this particular institutional setting is designed by a *divine* Designer named the *Invisible Hand of the Market* ("IHM").

As said, the nature of the IHM will be conceive of as divine in the same sense that they are divine Designers of the laws of nature (gravity, electro-magnetism, etc.) or such informal social rules as are customs, traditions, norms of behavior, conventions, self-imposed codes of conduct, etc.

Economic model of production

According to the elemental textbooks of economics, the behavior of John-the-producer can be represented by the input-output diagram (Figure 2):

Figure 2: Graphical representation of production process



where:

K, L stand for the inputs, broadly characterized as capital and labor, respectively,

Q is a magnitude of the firm's output—goods or services supplied to the market.

The graphical representation of production can be re-written analytically (mathematically) in the form of a so-called production function (Equation 2):

$$Q^{max} = f(K, L) \quad (2)$$

where Q^{max} is the maximal output that John can produce if a given combination K and L of the inputs is expended. In other words, John's behavior entails the transformation of two kinds of technological inputs into one particular output.

Economic efficiency – the profit

The core of the social rule imposed by *IHM* upon John rests in his obligation to maximize his firm's profit. To put it in more detail, John is obliged to realize the input-output combination $(K\ L, Q)^*$, that will maximize the firm's profit (Equation 3):

$$\pi(K, L, Q) = \left(p_{\mathrm{Q}}.Q - (p_{\mathrm{K}}.K + p_{\mathrm{L}}.L)\right) \quad (3)$$

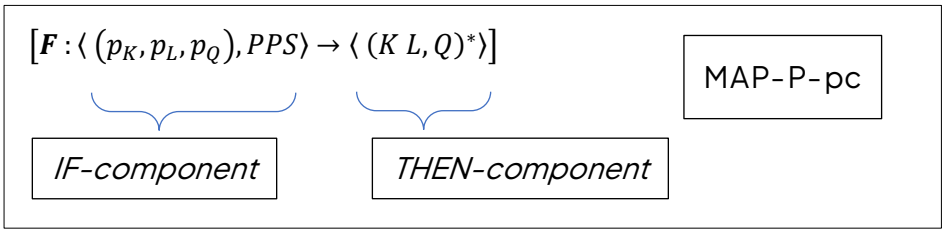
where $p_{\mathrm{K}}, p_{\mathrm{L}}$ and p_{Q} represent the prices of the two inputs K, L and the output Q.

Trivially, then, the profit-maximizing production $(K\ L, Q)^*$ depends on the prices. For example, the higher the price p_{Q}, the higher the output Q^* John will have to deliver.

In addition to the prices, the profit-maximizing production $(K\ L, Q)^*$ will also depend on the firm's technological capacity. Formally, the capacity is represented by the above production function $Q^{max} = f(K, L)$, or, for simplicity, the firm's production possibility set ("*PPS*").

Summarizing, then, the general formula *MAP* can now be operationalized into *MAP-P-pc* (Figure 3):

Figure 3: Firm's production possibility set



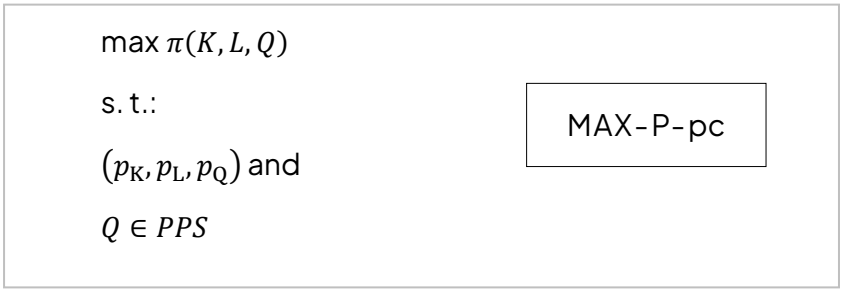
where *P* stands for a "producer" and *pc* represents the fact that John operates in a perfectly competitive market.

Social rule vs. social principle

However, the *IHM* does design the social rule as *MAP-P-pc* directly. All that *IHM* imposes upon John is only a *principle* according to which he is to maximize profit, $\pi(K, L, Q)$ *subject to* ("s. t.") the actual level of the prices (p_K, p_L, p_Q) and the firm's technological capacity PPS.

Put the same formalistically, the principle can be written as a profit maximization "mathematical exercise" *MAX-P-pc* (Figure 4):

Figure 4: Profit maximization



Hence, to find out what precisely John is to do, he must resolve this exercise and determine the concrete values of the three components of the looked-for combination $(K\ L, Q)^*$.

As explained, each of the components will depend on the prices and the technological capacity. Put formally, the components will be obtained as follows:

A pair of demand functions (Equation 4 and Equation 5):

$$K^* = D\left((p_K, p_L, p_Q), f(K, L)\right) \tag{4}$$

$$L^* = D\left((p_K, p_L, p_Q), f(K, L)\right) \tag{5}$$

and a supply function (Equation 6):

$$Q^* = S\left((p_K, p_L, p_Q), f(K, L)\right) \tag{6}$$

Each of these three functions can then be said to represent a partial social rule designed and imposed upon John by the divine IHM.

Contributions to the theory of institutions

Recommendations of the Lawyer and the Economist

In Tříska (2017) and Tříska (2021), we have dealt with know-how transfers *to and from* legal scholarship and economics. In the present article, we seek to confront the two disciplines with the theory of institutions. Given that the Institutionalist associates *institutions* with his or her key word, social rule, our objective has been to uncover this term within the usual parlance of the Lawyer and the Economist.

Obviously, a legal norm has been directly interpreted as nothing more or less than a specific instance of the general category of social rules. By far less obvious has proved our search for social rules inside the toolkit of the Economist.

As a result, we can now summarize that:

the Lawyer	may propose to the Institutionalist that the Designer and Executor should be (cost what it may) assigned to any social rule,
the Economist	is ready to recommend that a Designer should always be seen as a decision-maker in the sense of economics, i.e., as an agent who selects an optimal social rule from a set of variant social rules.

As to the language, for ease of expression, the Institutionalist is advised to denote the variants as (Equation 7):

$$\{sr_1, sr_2, \ldots, sr_N\}^M \tag{7}$$

where by the superscript M will be expressed that it is the Designer named Mary who believes (rightly or wrongly) that the N variant social rules are feasible (accessible, legal, etc.).

Similarly, Mary's preferences—for the ease of expression, again—can be represented by a utility function $U^M(sr)$ by whose different levels the Institutionalist will represent Mary's value judgments—how much she likes or dislikes this or that social rule.

With this methodological arsenal, the answer to Mary's question of what social rule str^* should be best imposed upon John is obtained as a solution to the "mathematical exercise" *MAX-M*(Figure 5):

Figure 5: Choice of the social rule

$$\max U^M(sr)$$
$$\text{s.t.: } sr \in [sr(0) = \{sr_1, sr_2, \dots, sr_N\}^M]$$

MAX-M

At this stage of our argument, it must be enough to only note that *MAX-M* is nothing more than a formalized way how to document the—as if trivial—statement that Mary will impose upon John a social rule sr^* that she likes better than any other rule.

The non-trivial content of *MAX-M* rests in that it is construed by two universal building blocks, namely preferences (expressed by the utility function) and constraints (constituted, as said, by the fact that sr^* must be feasible, e.g., legal, technologically achievable, financially affordable, etc.[3]

Methodological comments

However empty *MAX-M*may appear, a few observations of value may be derived from it.

System and hierarchy of social rules

Once sr^* is imposed upon John, Mary will install John into the position akin to that of the above discussed producer subordinated to the power of the *IHM*.

However, unlike in the case of *IHM*, we should now ask who has empowered Mary to exercise power over John.[4]

To put it more accurately, we should ask: who imposed upon John the "adjacent" social rule to obey the outcomes of Mary's choice? To illustrate and for dramatic effect, we may conceptualize a Designer ready to institutionalize a social rule under which all men, without thinking, will always obey the orders of any woman.

[3] We are aware of the sharp critique of this concept by Buchanan (1966).
[4] Here we may refer to the legendary question quoted, e.g., by Hurwicz (2007).

Institutional change

As said, the structure of the *MAX-M* is universal. Its two universal building blocks thus lead to a universal classification of institutional changes.

To illustrate, due to technological or administrative developments, the set of feasible social rules $\{sr_1, sr_2, \ldots, sr_N\}$ may change, as, e.g., some of the original social rules may be made illegal by some higher-level Designer.

Induction (abduction) of a Designer's motives

Within an elemental social setting, the content of sr^* is certain, and John is assumed to always behave consistently with the rule. Consequently, there is no uncertainty about what John will do in the future, depending on whether and how exactly the respective conditions (the *IF*-component of the rule) will be satisfied. Put differently, John's behavior can be deduced or predicted from the rule's *IF-THEN* structure.

By contrast, the knowledge of the sr^* provides no clue to the knowledge of the respective *MAX-M*. Therefore, Mary's problem and her variant strategies for solving it can only be induced or abducted—at best in the form of an educated guess.[5]

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[5] A brilliant example of this kind of an ex-post search for an agent's motivation is given in Posner (1993). The deduction-abduction problem is extensively discussed in Lawson (1997).

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