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

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Abstract

In the past, the author addressed the transfer of knowledge between legal scholarship and economics. In the present article, the author attempts to bring the two disciplines into confrontation with a theory of institutions. Given that the term *institution* is predominantly associated with that of a *social rule*, the aim is to elucidate it within the conventional terminology of the legal and the economic professions. As anticipated, the legal professional's understanding of a legal norm is directly interpreted as a specific type of social rule. It is less evident that the author is seeking to identify social rules within the field of economics. The author concludes that it would be beneficial for the institutionalist to propose to the lawyer that every social rule (formal or informal) should be assigned its designer and executor. Similarly, the economist can propose viewing the designer as a decision-maker who, in the sense of standard economic theory, selects an optimal social rule sr^* from a set of alternative social rules $sr_1, sr_2, sr_3, \ldots, sr_N$. Consequently, the author also suggests replacing the natural language of social scholarship with more formal vehicles of communication.

Keywords

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

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Introduction

This conceptual paper seeks to establish a connection between the fields of legal scholarship and economics with a particular focus on the concept of social rules as perceived by the institutionalist. In this paper, we build on the insights presented in Tříska (2017) and Tříska (2021) to unravel the complex relationship between legal norms and social rules in the discourse of both lawyers and economists.

The principal objective is to demonstrate that a legal norm can be regarded as a particular instance of a more extensive set of social rules. The aim of the study is to demonstrate the existence and implications of social rules within the economic framework through a comprehensive analysis of the economist's toolkit. The findings of our investigation have led to the formulation of several significant recommendations for both disciplines.

1) Lawyers may propose the assignment of designers and executors to any social rule, thereby underscoring the significance 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, thereby introducing the dimension of economic decision theory into the discourse.

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

More, this paper examines the implications of implementing a selected social rule, analyzing the evolution of power dynamics and the formation of hierarchies within a system of social rules. This gives rise to significant concerns regarding the capacity of individuals to exert influence over others and the subsequent imposition of adjacent social rules.

Ultimately, by positing MAX-M as a universal structure applicable to diverse contexts, the paper advances our comprehension of institutional change. The investigation is conducted within the framework of feasible social rules, with a view to classifying institutional changes influenced by technological advancements and administrative developments.

This paper offers valuable insights into the interdisciplinary exchange between legal scholarship and economics, elucidating the shared and distinct perspectives on

social rules. It provides methodological tools and theoretical frameworks that enhance our comprehension of decision-making processes and power dynamics within institutional contexts.

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*. Despite the lack of consensus regarding its structure and scientific foundation, there is a general consensus regarding the key questions under its purview: the origins of specific emergent institutional settings – their persistence and change – and, in particular, the nature of these institutions.

In the present article, we will focus almost exclusively on this latter topic. Building upon the insights presented in the Tříska (2017)[1] monograph, we will elaborate on a proposition that may initially appear counter-intuitive or improbable: that legal norms, as discussed within legal scholarship, can be conceptualized as institutions of a genre akin to the demand/supply functions introduced by textbook economics.

This rather unexpected methodological bridge between the lawyer's and the economist's enterprise is believed to open promising avenues for a more profound examination of the somewhat opaque concept of institutions and their variant settings.

Furthermore, drawing upon the dual lenses of social choice and behavior – as seen through the lenses of the legal and economic professions – we will examine the relative merits and drawbacks of their respective modes of communication. These may be broadly classified as *narrative* and *formalistic, respectively*.

Illustrative definitions

The institutionalist has, for the most part, adopted Douglass North's (1990, 1993) definition, namely that *institutions are the socially devised constraints that structure human interaction – affect the incentive structure of societies and specifically economies.* In accordance with the methodology of another Nobel Prize-winning institutionalist, Olinor Ostrom (2009), the term "constraint" is employed in lieu of the word "rule".

Jupille and Caporaso (2022) then proceed to expand North's definition in a bold manner, defining institutions as *intertemporal social arrangements that shape human relations in support of particular values.* In detail, they then elaborate on the terms

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

intertemporal, social, and arrangement, to describe how these concepts shape human relations, in support of particular values.

Additionally, the two authors also cite Alfred North Whitehead's observation that social institutions are *institutionalized* social rules, or rules that have *managed to entail a constitution of a set of important operations that members of the community can perform without thinking about them*.

In conclusion, Paul D. Bush (1987) posits that *a society may be conceptualized as a network of institutional systems. An "institutional system," in turn, may be conceived 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 be limited to the concept of a social rule in its own right, irrespective of whether or not it has been institutionalized. In essence, our proposal will be founded upon the following theses:

1) A social rule will be assigned its designer and an executor, where:
   - A designer is defined as an individual who imposes a social rule upon an executor,
   - with the intention of influencing the executor's behavior in order to address a specific problem. This influence can be observed in various forms, including constraining, shaping, regulating, coordinating, or stimulating the executor's actions.

2) A social rule, like any other rule, has its universal *if-then* structure.
   - The "if" component defines a set of *conditions*, while the "then" component is assigned the empirical meaning of the executor's *obligation*.

3) A social rule represents a designer's conviction that the rule will facilitate the resolution of a specific problem. Consequently, the design of the rule can be regarded as a *strategy* for resolving the problem in question.

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]

Specific and peculiar Designers

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

1) in the roles of a designer and executor being the same person, i.e., the cases of *self-imposed* social rules, often referred to as designer's objectives, plans, goals, etc.
2) a 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 a common practice in the field of science to focus on the most basic configuration of the system under study, regardless of whether or not it may exist in reality. In other words, reality is simplified to facilitate analysis.

In order to elucidate the intricate nuances of a genuine designer-executor relationship, we will occasionally adopt an idealized framework comprising two individuals, designated as Mary and John, who are assumed to possess a singular identity. Moreover, this institutional setting will be considered fundamental 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 ability to impose a specific social norm upon John or to influence (control, shape, regulate, coordinate, or stimulate) John's behavior,
   - John's awareness of the constraints imposed upon him,

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

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

The latter characteristic is of particular 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

A triadic structure is a common feature of legal norms, which are typically conceptualised as comprising a *hypothesis*, a *disposition*, and a *sanction*. In light of our proposal regarding the universal (*IF-THEN*) structure of a social rule, we may define the *IF*-component as a *hypothesis* (a "legal condition") and the *THEN*-component as a *disposition* (a "legal obligation") as postulated by the Lawyer.

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.

In other contexts, we have elected to adhere to the principles of *dare* or *facere* exclusively and to conceptualize both terms as a *transfer* of a 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

In order to facilitate a comparison between the lawyer and economist approaches, it is necessary to identify the various attributes that are inherent to a legal obligation. In addition to the traditional considerations of *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.) of the obligation must also be taken into account.

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 not uncommon for a lawyer to view an individual in a variety of social roles as distinct agents. For that matter, it is usual to identify the agent in question.

The elemental setting allows for the invocation of different roles, which in turn allows for the identification of different agents. For example, Mary-the-Designer may be seen as different agents if taken as a mother of two, a driver, or a policewoman.

In different roles, the same individual will be capable of interacting as if with themselves. For example, they may impose a social rule on themselves. For dramatic effect, we may posit that Mary, the policewoman, arrests Mary, the driver, for her own drunk driving.

A Beneficiary of a social rule

In the context of the social dynamics between Mary and John, as depicted in the text, it is notable that Mary imposes a social rule upon John in favour of "third persons," such as Charles, her son.

In his capacity as a beneficiary of the social rule, Charles is entitled to demand that John fulfil his obligation. In other words, John is not permitted to initiate the fulfilment of the obligation 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.

On the search for social rules in Economics

In accordance with the initial proposal, the concepts of social rule, legal norm, and demand-supply function will be introduced as part of this analogous genre. It seems pertinent to begin by offering a few notes on the formal expression of a social rule.

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):

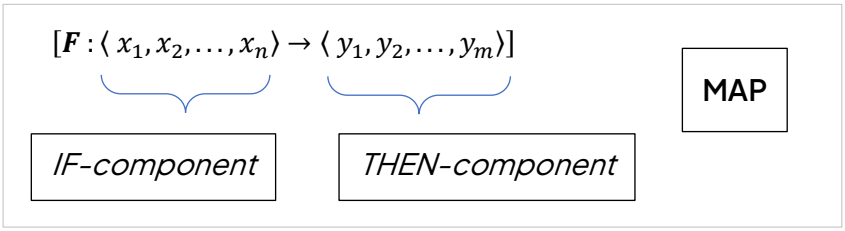
$$(y_1, y_2, \ldots, y_m) = \boldsymbol{F}(x_1, x_2, \ldots, x_n) \qquad (1)$$

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*.

It is evident that a domain and a range are merely alternative designations for the lawyer's *hypothesis* and a *disposition*, which the philosopher would classify as an *explanans* and an *explanandum*. The economist would frequently distinguish between the two sets of variables by employing 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 specific context of economics, the economist limits his analysis to a self-contained social system called the *economy*. In regard to this system, the economist posits that it is comprised of two fundamental categories of interacting agents: a producer (a firm) and a consumer (a household). In order to describe the fundamental basis of their interaction, the economist introduces the term "market." In order to further operationalise the MAP, the economist introduces a variety of market structures, including monopolistic and oligopolistic structures.

Subsequently, economists ascribed a specific category of producer and consumer along with the respective categories of social rules, to each such structure. Consequently, the economist operationalised two types of MAPs, defining the terms consumer demand, producer demand, and supply functions.

Institutional setting of a production

A producer under the social rule of perfect competition

In order to maintain a purely methodological approach, this article will limit its focus to a single economic agent: the producer, or firm. For the sake of simplicity, the firm's CEO, John, will serve as a representative example.

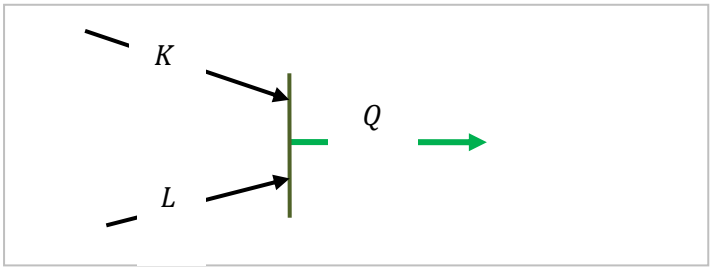
Furthermore, in order to focus the discussion, we will limit our consideration to a market structure that is broadly characterised as perfect competition. It is acknowledged that this particular institutional setting is designed by a *divine* designer named the *Invisible Hand of the Market* ("IHM").

As previously stated, the nature of the IHM will be conceptualised as divine in a similar manner to how they are perceived as the divine designers of natural laws (such as gravity and electromagnetism) and informal social rules (including customs, traditions, norms of behaviour, conventions and self-imposed codes of conduct).

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 rewritten 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):

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

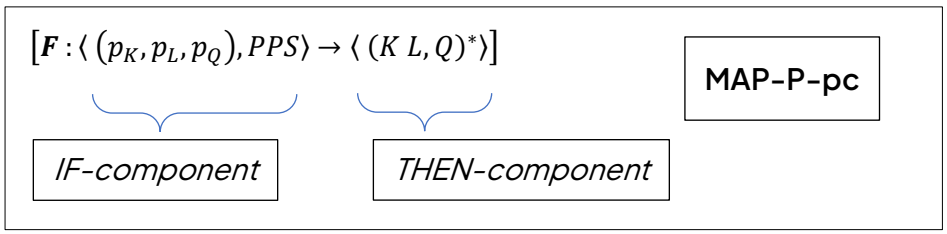
where $p_{\mathrm{K}}, p_{\mathrm{L}}$ and p_{Q} represent the prices of the two inputs K, L and the output Q.

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 $(p_{\mathrm{K}}, p_{\mathrm{L}}, p_{\mathrm{Q}})$ 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

max $\pi(K, L, Q)$

s. t.:

(p_K, p_L, p_Q) and

$Q \in PPS$

MAX-P-pc

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):

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

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

and a supply function (Equation 6):

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

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 from the Lawyer and the Economist

In Tříska (2017) and Tříska (2021), we have addressed the transfer of knowledge between legal scholarship and economics. The present article aims to bring the two disciplines into confrontation with the theory of institutions. In light of the fact that the institutionalist associates *institutions* with the term *social rule*, our objective has been to ascertain how this term is used in the everyday discourse of lawyers and economists.

It is evident that a legal norm can be interpreted as a particular instance of the broader category of social rules. Our search for social rules within the toolkit of the economist has proved to be considerably more challenging.

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):

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

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 juncture in our discourse, it is sufficient to merely observe that MAX-M represents a formalised methodology for documenting the ostensibly trivial assertion that Mary will impose a social rule (sr) that she prefers to any other rule upon John.

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 be more precise, we should inquire as to who compelled who compelled John to adhere to the social norm of respecting the consequences of Mary's decision. To illustrate and for dramatic effect, we may conceptualise a designer who is prepared to institutionalise a social rule under which all men, without thought, will always obey the orders of any woman.

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

In an elemental social setting, the content of sr^* is fixed and John is presumed to adhere to the rule in a consistent manner. Consequently, it is possible to make a reliable prediction about John's future behaviour, contingent on whether and how exactly the respective conditions (the *IF* component of the rule) will be satisfied. In other words, John's behaviour can be deduced or predicted from the rule's *IF-THEN* structure.

[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).

In contrast, the knowledge of the sr^* provides no indication of the knowledge of the respective *MAX-M*. Consequently, Mary's problem and her variant strategies for solving it can only be postulated 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).