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Interactive intentionality and norm formation

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Abstract

The paper aims at complementing Searle's social ontology with an epistemology capable of illustrating institution formation. To this purpose, I discuss Searle's conception of constitutive rules and show that it requires the specifications of normative powers and purposes identifying status functions to be taken as given. However, such specifications arise from underlying normative commitments that may be various and possibly conflicting. Hence, in order to account for the formation of institutions, it is necessary to understand how status function declarations may emerge from alternative normative commitments. I make the hypothesis of "interactive intentionality," as an interactive and deliberative mode of practical reasoning, to describe the processes of convergence on definite constitutive rules. These processes show how interactive intentionality may frame both commitment and enforcement, thus providing some insights to make rule-based and equilibrium-based accounts of institutions epistemologically commensurable.

Keywords: Status functions; constitutive rules; deliberation; practical reason

1. Introduction

The apparent conflict between the social-ontological account of institutions and the account prevailing in economics boils down to the opposition between theories based on commitment to rules and theories of equilibrium self-enforcement (Aoki, 2007, 2011; Greif, 2006; Greif and Kingston, 2011; Hodgson, 2006, 2015). In a nutshell, on the one hand, social ontology explains institutions in terms of commitment toward institutional norms that are produced by collective linguistic acts, often accounted for in terms of collective intentionality (Gilbert 1989, 2013; Searle, 1995, 2005, 2010). On the other hand, economics – and in particular game theory – relies on the notion of self-enforcement to explain conventions and social norms as the persistence of patterns of behavior in interactions among individuals (Lewis, 1969; Schotter, 1981; Sugden, 1986; Young, 1998). The debate that followed Hindriks and Guala's attempt to provide a "unified" theory of institutions points out that one major aspect of incommensurability between the two approaches concerns the Searlian notion of "constitutive rule" (Hindriks and Guala, 2014, 2015).

Hindriks and Guala's "rules-in-equilibrium" theory is based on the "transformation" of constitutive rules into regulative rules, i.e. on the possibility of translating the former into the language of the latter without semantic loss (see also, Hindriks, 2009). If this could be done, institutions would be dealt with as equilibria in regulative rules by applying the notion of correlated equilibrium (Gintis, 2007, 2009). However, game theorists reconfirmed their reluctance to admit constitutive rules (and collective intentionality) among their conceptual tools (Binmore, 2015; Sugden, 2015). On the other hand, John Searle (2015) opposed the reduction of constitutive rules to regulative rules by restating that, while regulative rules "regulate activities which can exist independently of the rule," constitutive rules "not only regulate but rather constitute the very behaviour they regulate, because acting in accordance

with a sufficient number of the rules is constitutive of the behaviour in question" (Searle, 2005: 9). In other words, ruling out this difference not only implies denying that constitutive rules "create" social ontology, but also leads one to overlook the fact that, within institutions, behaviors and facts in general are identified only because they are (collectively) assigned a normative meaning.

This paper assumes the irreducibility of constitutive rules and contributes to the unification debate by investigating how they are formed through interactive discursive procedures that set epistemic preconditions of both individual commitment and self-enforcement in social interactions. This corresponds to acknowledging that constitutive rules, while defining institutions, establish collective epistemic priors that solve social dilemmas and equilibrium selection issues (Hédoin, 2015, 2017). The hypothesis that is hereby proposed is that constitutive rules emerge from an interactive deliberation mode – which I name *interactive intentionality*. By involving practical reasoning, it develops the shared normative meanings assigned to institutional facts and, in general, to decision options in social interactions. Thus, the hypothesis of interactive intentionality reflects trends in moral philosophy that both reconsider deontological ethics as the result of historical, linguistic, and interactive processes (Habermas, 1990; Sandel, 1982) and support the reintroduction of practical reasoning as a determinant of normativity and institutional evolution (Crespo, 2007, 2016; Velleman, 2009). The main aim is complementing Searle's social ontology with an epistemology capable of representing the formation of institutions via deliberations and normative agreements that pave the way to "collective acceptance and recognition" and "status function declaration."

My argument takes its steps from the recognition of defined explanatory boundaries of Searle's conception of commitment to institutions. Indeed, the aim of social ontology limits the scope of Searle's account to the description of the necessary conditions of institution existence. These necessary conditions are summarized by the formula of constitutive rules: "X counts as Y in C." If a group "collectively recognizes" (or "declares") that a certain physical entity, person or state of affairs (X) possesses a given status function (Y) in a given context (C), then an institution exists (Searle, 1995, 2005, 2010). In other words, institutional entities exist as the result of the collective assignment of status functions, which are functions deriving from the definition of a status in terms of *deontic powers*, i.e. duties and rights attached to the entity. By referring to collective intentionality, Searle maintains that the collective statement of the status function binds individuals in joint commitment to the constitutive rule. In this sense, individuals' commitment intrinsically derives from the collective assignment of status functions.

However, no explanation for why individuals converge on *specific* status functions is provided. In other words, the process leading to the selection of a determined scope for status functions is not described. The reason that Searle's ontological description does not specify why determined status functions (and not others) are assigned to (some) persons, objects, or states of affairs (and not others) is that it requires only the analysis of formal and essential properties of the normative structures of institutions. But in this way, Searle's deontological ontology lacks the possibility of accounting for its own formation as a determined system of joint commitments.

I introduce the hypothesis of interactive intentionality to explain the formation of institutions as resulting from processes of convergence on specific status functions. The hypothesis is developed on the ground of an analysis of epistemic preconditions of identifiability of status functions; these preconditions affect the possibility that they are cognized as determined status functions, before individuals can state them as the object of a joint commitment. My analysis reveals three elements: first, the identifiability of status functions depends on the cognitive availability of alternative normative specifications of status functions in terms of *powers* and *purposes*; second, given the availability of alternatives, the collective commitment to one specific definition of the status function results from agreements and decisions; third, in order to explain this kind of decision, it is necessary to investigate how normative shared references are formed through deliberative processes involving practical reasoning.

The hypothesis of interactive intentionality is the conceptual tool used to analyse the process through which, from an initial situation where alternative value positions prevent the possibility of

an agreement, deliberation leads to a compromise in the definition of the status function. Drawing some insights from awareness logic (Fagin *et al.*, 1995), I first develop the philosophical notion of the "incommensurability of values" (Chang, 1997) to characterize the conflict between alternative normative positions as *non-compatibility of values*. Then, I study how conflict resolution is obtained and how it affects the epistemic conditions on which the possibility of an agreement is based. To this purpose, I will present an historical example of political deliberation leading to status function declaration: the debate concerning the first article of the Italian Constitution in the Constitution Assembly of Italy between 1946 and 1947. This example clearly shows how institutional formation results from agreements concerning the normative specification of the status function in the context of alternative value positions. A simple game theory argument will clarify how interactive intentionality, while providing the debate with shared normative terms, sets the payoffs that make the constitutive agreement actually self-enforcing.

This article proceeds as follows. The second section highlights that the specification of deontic powers and purposes acts as an epistemic precondition of status function identifiability. The third introduces variety in normative specifications of status function and presents two examples of under-determination. Section 4 defines compatibility and non-compatibility and investigates conditions of normative conflict resolution at the individual level. Section 5 formulates the hypothesis of interactive intentionality and applies it to interpret the epistemology behind the "constitution game," provided as a historical example of institution formation. Section 6 contains a few concluding remarks.

2. Normative preconditions of status functions: purposes and powers

Searle's description of the conditions of social reality is obtained through the notion of "status function," which, being applied to formal and abstract properties, necessarily disregards the variety that characterizes institutional normativity (Sanchez-Cuenca, 2007; Viskovatoff, 2003; Zaibert and Smith, 2007). This section highlights that variety is an epistemic precondition of status function identifiability by showing that their "collective acceptance and recognition" depend on the specification of determined normative powers and purposes among alternatives.

Three primitive notions are required by Searle's social ontology to account for the subsistence of institutional entities: "collective intentionality," "function," and "status." Searle (2005: 7) connects them as follows: collective intentionality intervenes in the collective assignment of "functions on objects where the object does not have the function, so to speak, intrinsically but only in virtue of the assignment of function." The assignment of the function goes together with the recognition of a certain status:

> the object or person to whom the function is assigned cannot perform the function just in virtue of its physical structure, but rather can perform the function only in virtue of the fact that there is a collective assignment of a certain *status*, and the object or person performs its function only in virtue of collective recognition by the community that the object or person has the requisite status. (Searle, 2005: 7–8)

First, I discuss the connection between the notions of "collective intentionality" and "function," showing that this connection presupposes the cognition of a determined *purpose*. Second, I discuss the connection between "function" and "status," which is mediated by the cognition of a determined *power*.

The theoretical connection between the two primitive notions of "collective intentionality" and of "function" is given by the Searlian conception of collective assignment. Collective assignment is the basis of social ontology in so far as the assignment of a certain function to a specific object depends on the fact that individuals may form collective intentions, and may adhere to a common recognition of that object as having a certain function. Searle refers to the epistemology of collective intentionality in order to interpret collective recognition of institutional functions. While they assign the function to

the entity, individuals join together in collective intentionality by interpreting that object as having that function.

Assigning and recognizing a function necessarily correspond to identifying what purpose is served by the object, person or state of affairs. As clarified by Searle, the identification of any kind of function always presupposes the specification of a purpose:

> *functions are always intentionality-relative* […] When we discover functions in nature, what we are doing is discovering how certain causes operate to serve a certain purpose, where the notion of purpose is not intrinsic to mind-independent nature, but is relative to our sets of values. […] Where do the values come from? The clue that there is a normative component to the notion of function is that once we have described something in terms of function we can introduce a normative vocabulary. […] To put the point succinctly, if perhaps too crudely, *a function is a cause that serves a purpose*. And purposes have to come from somewhere; in this case they come from human beings. In this sense, functions are intentionality-relative and therefore mind-dependent. (Searle, 2010: 59)

Consequently, we can consider that the relation between Searle's application of collective intentionality and his notion of institutional function is mediated by the notion of "purpose." Any institutional entity possesses a function insomuch that it corresponds to a certain social purpose. In other words, the purpose is a necessary condition for the identifiability of the institutional function, as it stands for the content of collective intentionality in the collective assignment of a status function.

People involved in collectively assigning the function are, for the same reason, committed to implement it because they mutually engage with language in collective intentionality (Gilbert, 2007; Zaibert, 2003), and in particular in the speech act of "status-function declaration" (Searle, 2010). Searle's application of collective intentionality is compliant with Gilbert's theory of "joint commitment," for which adhering to a common purpose in collective intentionality is at the same time being normatively committed to it as a joint objective (Gilbert, 1989, 2013). It is the collective determination of a purpose that makes collective assignment of institutional functions not reducible to cooperation in the sense of I-intentionality plus mutual beliefs (Searle, 2010: 45–50), as for example maintained by Tuomela (1988, 1991, 2005).

However, it must be observed that a function must already be identified with respect to the purposes it serves in order to be an object of collective assignment. Only with reference to determined purposes can the function be recognized and consequently stated as constitutive of the institutional entity. When behaving in accordance with constitutive rules, individuals must believe that the function they are assigning reflects the specific purpose that has been originally identified as defining the function itself. In this sense, Searlian assignment of functions depends on the cognition of defined purposes that individuals must realize before they engage in joint recognition and commitment. But it then becomes legitimate to ask ourselves the following questions: what identifies the determined institutional function as the function satisfying that specific purpose and not others? How do individuals identify that *specific* purpose as the object of joint commitment?

The connection between the primitive notions of "function" and "status" derives from the consideration that assigning an institutional function implies necessarily accepting a normative status. In Searle's words, the institutional object or person "cannot perform the function in virtue of their physical structure alone, but only in virtue of the collective recognition of the object or person as having a certain *status* and with that status a function" (Searle, 2005: 7–8). The status is specified in terms of *deontic powers*, i.e. the formal definition of duties and rights, providing people within institutions with *desire-independent reasons for action*:

> The essential role of human institutions and the purpose of having institutions is not to constrain people as such, but, rather, to create new sorts of power relationships. Human institutions are, above all, *enabling*, because they create power, but it is a special kind of power. It is the power

that is marked by such terms as: rights, duties, obligations, authorizations, permissions, empow-erments, requirements, and certification. I call all of these *deontic powers*. […] They are structures of power relationships. […] how exactly do these power relations function? The answer, which again is essential to understanding society, is that institutional structures create desire-independent reasons for action. To recognize something as a duty, an obligation, or a require-ment is already to recognize that you have a reason for doing it which is independent of your inclinations at the moment. […] the creation of the general field of desire-based reasons for action presupposes the acceptance of a system of desire-independent reasons for action. (Searle, 2005: 10)

 The notion of "deontic power" is inherent to the notion of "status." An institutional entity is iden-tified as possessing a certain status to the degree that it displays certain deontic powers, and *vice versa*, certain deontic powers identify person(s) or object(s) as having a certain status. Moreover, the func-tion of the institutional entity (and hence its implicit purpose) reflects its status and relative deontic powers. By specifying "desire-independent reasons for action," deontic powers define a set of possible actions, which are assigned a normative value. Duties and rights assigned to the institutional entity are defined in terms of potentiality of action and linked to the definition of the function in terms of a purpose.

 Yet as observed before when discussing the epistemic dependence of functions on purposes, also statuses depend on the cognition of a common definition of power. Individuals have already cogni-tively identified a specific scope of powers before they join together in the collective assignment of that specific status to the institutional entity. In other words, it is essential to the assignment of a spe-cific status to a determined bearer that the scope of its powers is already defined. In this sense, the predetermination of powers counts as a cognitive precondition of status acceptance and assignment.

 Thus, the identifiability of functions and statuses within the collective recognition of status func-tions depends on the availability of a shared precognition of purposes and powers. In other words, the cognition of defined purposes and powers acts as an epistemic precondition for the identification of status functions in collective intentionality. The collective intentionality approach needs to take these epistemic preconditions of identifiability as a given. However, investigating them introduces the possibility of dealing with the process of convergence on definite powers and purposes and hence with a crucial aspect of institution formation.

3. Institutional variety and constitutive agreements

If the identifiability of status functions depends on individual cognition of shared normative specifica-tions of purposes and powers, the commitment to determined constitutive rules depends on decisions and agreements about those specifications. This section introduces the possibility that a given status function may be subject to multiple alternative normative interpretations. Allowing for multiple alter-native interpretations implies that a collective adherence to a given status function depends on the selection of a determined specification of purposes and powers. Two concrete examples illustrate two crucial aspects of under-determination of status functions with respect to purposes and powers. The first concerns the identifiability of the function Y and derives from the circumstance that, when-ever the purpose defining the functionality of a given institutional entity is subject to debate, norma-tive decisions and agreements are prerequisites of collective recognition. The second concerns the identifiability of the object X, and derives from the circumstance that the identification of the subject of deontic powers needs to be normatively decided and agreed upon together with the scope of powers as a prerequisite of the status assignment.

 As a consequence of the "migrant crisis," some of the EU member states started unilaterally devi-ating from the Schengen Agreement on free movement of persons by reintroducing border controls (Lillie and Simola, 2016). This created a situation where the normative definition of some of the internal EU national borders became subject to ambiguity. On the one hand, given that EU countries

presently comply with Schengen, the border is still assigned the distinctive function of allowing for the free movement of persons. On the other hand, the state that reintroduces border controls is actually assigning another function that is in principle not compatible with that assigned by Schengen. In this situation, it is the normative purpose behind the status function that is subject to debate and this implies that the institutional entity is contingently assigned two alternative functions by contending countries.

To put it in Searle's words, the same status function, Y = "The national border," specifies a different institutional entity, depending on the alternative definition of its function that derives from the normative assumption of a purpose. Specifically, we can say that the same material confines can count as a national border according to two alternative normative specifications of purposes, y_1 and y_2. If the normative purpose behind the status function assignment is the Schengen one – namely, allowing people to move across EU states – the national border does not constitute a limit to the movement of persons. If the normative purpose behind the status function assignment is limiting movements of migrants, the national border is subject to a different functional definition not compatible with the first one – namely, limiting free movements of persons across internal EU borders. Consequently, among contending member states, there contemporarily exist two interpretations of the status function assigned to the same physical confines, and, accordingly, two status function declarations:

(1) X counts as Y, *only if* $Y \rightarrow y_1$: the physical confines are recognized as a national border only if it is recognized that the national border serves the purpose of allowing for the free movement of persons.

(2) X counts as Y, *only if* $Y \rightarrow y_2$: the physical confines are recognized as a national border only if it is recognized that the national border serves the purpose of limiting the free movement of persons.

It is important to underline that in both specifications only one status function declaration, "X counts as Y," is at stake: i.e. in both cases, what is collectively recognized is the ontology of the physical national confines as a national border. However, the two status function declarations are normatively not compatible, given that either purpose y_1 or purpose y_2 is recognized. Actually, from an external *observer's perspective* two alternative status functions are at stake: Y_1 if the function is compliant with the purpose y_1, and Y_2 if the function is compliant with the purpose y_2.[1] However, from the perspective of the contending countries – i.e. from the *agents' perspective* – the two specifications of purposes concern the same status function that is indeed under debate. In this sense, the same status function may contemporarily receive different specifications deriving from alternative assignments of purposes. The possibility that the same status function may be subject to conflicting normative interpretations highlights the first aspect of under-determination. If multiple alternative specifications are available, a specific status function declaration is achieved if and only if one underlying normative purpose is agreed upon between relevant agents (EU states, in our example). The function is not defined and cannot be object of collective recognition otherwise.

The second aspect of under-determination concerns the status assignment. If we take as an example the status of "citizen," we observe that in a given historical moment, in a given nation, the notion of a status is defined precisely by the specific deontic powers it enables, e.g. voting rights, the right to education and health, etc. However, the status function of "citizen" also depends on the identification of a class of subjects that plays the role of X in the status function declaration "X counts as citizens." Indeed, this identification depends on the specification of characteristics that normatively differentiate that class of subjects from other classes, in such a way that the status can be assigned to a defined

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[1]As will be clarified the exclusive disjunction "XOR" accounts for cases of non-compatibility between alternative specifications of status functions. In this example, given that $y_1 = -y_2$ either $Y \rightarrow y_1$ or $Y \rightarrow y_2$ holds. Thus, $Y_1 \text{XOR} Y_2$ represents either "X counts as Y_1" or "X counts as Y_2."

object. In other words, the process of status assignment requires that the subjects entitled to enjoy the powers are already identified, together with the scope of those powers. Yet the selection of the subjects of powers – as the selection of the scope of powers – is the result of a normative decision that represents another source of multiple and possibly conflicting interpretations of the given status function.

In the case of the status of "citizen," various specifications concerning who is entitled to acquire the status derive from the acknowledgment of alternative normative principles. In particular, the status is generally assigned according to two alternative principles. On the one hand, the *Ius sanguinis* assigns persons the citizenship of (at least one of) their parents. On the other hand, the *Ius soli* considers citizens all the persons born into a country. These alternative status specifications – *ceteris paribus* with respect to other naturalization policies – crucially decide on the possibility that newcomers may acquire citizenship. They actually reflect two different value-based assumptions concerning the notion of "the nation" or "the state" (Honohan, 2010).

Hence, the concrete characteristics identifying the bearer X of the status function are actually selected together with the definition of the power assigned by the status function "citizen." Indeed, the status function assignment must specify the category of bearers who hold the power in order to act as a determined status function. In our example, two specifications y_1 and y_2 identify the relevant X and lead to two alternative declarations:

(1) X counts as Y, *only if* $Y \to y_1$: a person is recognized as a citizen of the country k only if it is recognized that to acquire the status of citizen a person must have parents who are citizens of the country k.
(2) X counts as Y, *only if* $Y \to y_2$: a person is recognized as a citizen of the country k only if it is recognized that to acquire the status of citizen a person must be born in the country k.

If we exclude cases in which the person and parents were born in the same country, the two status function declarations are normatively not compatible and they alternatively select the class of persons identified by y_1 or by y_2. Eventually, the two specifications of power identify two alternative classes of persons to which the (same) status function applies, so that we end up with two alternative status functions: Y_1 if the defined status is compliant with the power assignment y_1, and Y_2 if it is compliant with the power assignment y_2. In other words, in this case also the specific normative meaning of a status function is subject to under-determination with respect to a normative agreement, in this case crucially concerning the identification of X.

Even if, at any given time, either one or the other status function is officially recognized, the fact that one status function may be subject to multiple alternative specifications makes an analysis of the formation of status functions possible. The two examples of under-determination illustrated above show that, if the identification of both Y and X requires the specification of defined purposes and powers in order to be the object of collective recognition via the status function declaration, then normative decisions and agreements concerning those powers and purposes play a crucial role in the constitution of its social ontology. These decisions and agreements remain out of the scope of social-ontological description. As noted above, Searle needs to take the selection of the relevant powers and purposes as a given in order to pose collective intentionality as the epistemological basis of social ontology and of commitment itself. However, once the possibility of alternative specifications is acknowledged, we need to deal with the process that leads to the emergence of shared definitions in the context of alternative and possibly conflicting normative commitments of individuals. In other words, what makes people decide and agree on the definition of institutional powers and purposes among multiple alternatives? Recalling Searle's question quoted above, we can ask ourselves "Where do the values come from?" (Searle, 2010: 59).

4. Commitment and conflict

In order to complement Searle's social ontology with a theory of constitutive rules formation, we have to account for how a common definition of normative powers and purposes is formed in the discursive

processes that lead to status function declarations. To this end, a simple formalization of *deliberation* is introduced in this section. It elaborates on the notion of incommensurability of values (Chang, 1997) in order to illustrate the epistemological conditions of the compatibility and non-compatibility of normative values. These conditions are investigated in this section at the level of individual deliberation by informally applying awareness logic (Fagin *et al.*, 1995). The basic intuition is that normative, value-based commitments are epistemic priors of decisions. They affect knowledge concerning the decisional situation by interpreting the relevant options in normative terms. From this perspective, normative dilemmas illustrate situations where assigning alternative values confines the decision-maker to conflicting interpretations of reality that prevent decision. On the other hand, practical reasoning is seen as the deliberative process that, by changing normative priors, discovers interpretations of reality in which a solution to the dilemma exists. I account for this process of discovery in terms of the acquisition of *normative awareness*. In section 5, this notion of normative awareness will be applied at the intersubjective level to the interactive deliberations that are behind the emergence of shared specifications of status functions.

The main hypothesis is that the Searlian "desire-independent reasons for action" selects the states of the world where the decision-maker believes himself to be. In particular, value commitments identify strategies and outcomes by interpreting them in terms of deontic powers (e.g. actions that ought/ought not to be carried out) and normative purposes (e.g. outcomes that ought/ought not to be pursued). In this way, commitment to values acts as both a semantic and a prescriptive principle. As a semantic principle, it interprets the actions and consequences in the decisional situation, assigning them a normative meaning. As a prescriptive principle, it excludes options that are not compliant with the normative values and motivates the subject to opt for the legitimate one. In other words, each state of the world contains all the facts $X: x_1, \ldots, x_n$ that are interpreted as either actions or outcomes. Value commitments select the states of the world where the decision-maker believes himself to be, assigning normative meaning to facts. Those states of the world in which options that comply with the normative assumptions are believed to be viable are selected (and all other states of the worlds are deselected).

This approach can be schematized as follows. If an individual is committed to a certain value Γ, a certain action (outcome) x_k is normatively interpreted in terms of a defined power (purpose) and counts as y (i.e. y expresses its normative, deontic meaning). In other words, she believes herself to be in a state of the world in which, by choosing x_k, she is doing y. Since her commitment compels her to do x_k, any other option that would deny y – i.e. any other x_j that, according to Γ, counts as -y – is actually not available as alternatives. For example, only if an individual is committed to the value of "honesty" will she interpret a certain action implying lying as dishonest behavior, and thus she will disregard that option. We will write $\Gamma \rightarrow y$ to mean that, given the commitment to Γ, the normative meaning y is believed to be truly assigned to the option x_k. Given her normative prior the individual believes herself to be in a state of the world in which she does y by doing x_k.[2]

This simple formalization allows us to introduce two definitions of *compatibility* and *non-compatibility* among normative values. Let us, for example, imagine a decision-maker who faces the prisoner's dilemma and has to decide whether to confess to the crime that he has committed together with a friend (option x_k) or not to confess (option x_j). Since he is committed to the value of "honesty" (Γ), he believes that only the option x_k is normatively right. Thus, he believes himself to be in a state of the world in which only x_k counts as y_1 = "behaving honestly" (and x_j counts as -y_1). This is equivalent to saying that, given Γ, he believes himself to be in a state of the world in which he does y_1. For simplicity, $\Gamma \rightarrow y_1$. However, Γ is not the only normative value he is committed to. Let us imagine that, even if he has carried out a crime, he is also committed to a value of "loyalty toward the state laws" (Δ). Also according to Δ, only the option x_k is normatively valid. Consequently, he also believes himself to be in a state of the world in which x_k counts as y_2 = "complying with the state law" (and x_j counts as -y_2) and consequently that he does y_2. Hence, $\Delta \rightarrow y_2$.

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[2]The definitions are hereby developed only with reference to deontic powers and actions, but they apply analogously to purposes and outcomes.

In this decisional situation, the decision-maker may jointly assign the two normative values to the same option. Indeed, he may believe himself to be in a state of the world in which confessing is at the same time being compliant with "honesty" and "loyalty to the state laws." Thus, we define two values Γ and Δ as *compatible* ($\Gamma C\Delta$, hereafter) when the decision-maker believes that he is deciding in a state of the world in which those values can be jointly assigned to the same action or, equivalently, that, by opting for that action, he is simultaneously satisfying both his commitments, i.e. that, by doing x_k, he does y_1 and y_2. Succinctly: $\Gamma C\Delta$ *iff* the decision-maker believes that x_k counts as y_1 and y_2 ($\Gamma C\Delta \leftrightarrow y_1 \text{AND} y_2$).[3]

Conversely, a decision-maker may be committed to values that are in conflict: that deploy contrasting normative assignments to the relevant options and compel him to adopt strategies that are mutually contradictory. Let us imagine that another decision-maker facing the same decisional situation, besides "honesty" (Γ), is committed to the value of "loyalty toward friends" (Π). Given his commitment to Π, he believes that the only option x_j (i.e. not confessing) is normatively right. Thus, he believes himself to be in a state of the world in which only x_j counts as y_3 = "being loyal toward his friend" (and x_k counts as $-y_3$). This is equivalent to saying that he believes himself to be in a state of the world in which, by complying with Π, he does y_3. For simplicity, we write: if $\Pi \rightarrow y_3$.

However, his commitment to Π is clearly in conflict with his commitment to Γ. On the one hand, owing to his commitment to "honesty," he believes that confessing is normatively the right option. On the other hand, owing to his commitment to "loyalty toward friends," not confessing seems to be what he ought to do. This conflict leaves the decision-maker in a dilemma: he cannot consistently apply the two values to the options. In other words, either given Γ he does y_1 by doing x_k, or given Π he does y_3 by doing x_j. Hence, we can define two values Γ and Π as *non-compatible* (Γ-CΠ, hereafter) when the decision-maker believes that he is deciding in a state of the world in which they both cannot be coherently assigned to the options or, equivalently, that his action complies with either one or the other, i.e. either he does y_1 by doing x_k or y_3 by doing x_j. Succinctly: Γ-CΠ *iff* the decision-maker believes that x_k counts as y_1 or x_j counts as y_3, since $y_1 = -y_3$ (Γ-C$\Pi \leftrightarrow y_1 \text{XOR} y_3$).[4]

The non-compatibility of values generates situations in which dilemmas remain unsolved and decisions under-determined. However, we commonly experience processes of deliberation that solve the conflict between alternative value commitments. Thus, we may investigate the conditions under which a decision-maker arrives – through deliberation – to a decision in such situations of normative conflict. Precisely, the following analysis focuses on the epistemological characteristics that a resolution must have in order to solve conflicts by changing the decision-maker's beliefs concerning the state of the world in which he is deciding.

We can for example make the hypothesis that, by deliberating on the decisional situation, the decision-maker recognizes that, besides the values of "honesty" ($\Gamma \rightarrow y_1$) and "loyalty toward friends" ($\Pi \rightarrow y_3$), he is also committed to a value of "justice" ($\Theta \rightarrow y_4$) that makes him think that it is just to punish crimes. Such a value acts as a meta-ethical criterion reinterpreting the whole decisional situation. In other words, the decision-maker, on the basis of Θ, realizes that the normative interpretation y_4 represents a semantic/prescriptive premise of both the originally conflicting interpretations, so that he now believes that $y_4 \rightarrow y_1'$ and $y_4 \rightarrow y_3'$. The prime signals that the two originally normative interpretations are changed by the discovery of the resolution value. Indeed, we can imagine that his behaving honestly may translate into his accepting the punishment. Consequently, by acknowledging Θ, he believes he is deciding in a state of the world in which, if he accepts the punishment by confessing (x_k), he is behaving honestly ($y_4 \rightarrow y_1'$). At the same time, it might be the case that he believes that his idea of "justice" should be recognized also by his friend. Accordingly, he might believe that accepting the punishment implies being loyal to the friend and, given the belief that the value Θ is shared with him, acting in its accordance is equivalent to not betraying him ($y_4 \rightarrow y_3'$).

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[3]The logical conjunction "AND" is true only when both y_1 and y_2 are true.
[4]The exclusive disjunction "XOR" is true only when either y_1 or y_3 is true (but not both simultaneously).

The discovery, through deliberation, of the solution-value Θ implies that the two original conflicting values change their semantics in such a way that they end up being compatible.[5] Thus, the decision-maker believes that the state of the world in which he complies with Θ is a state of the world in which acting in accordance to "honesty" means being compliant to "loyalty toward friends" and *vice versa* ($\Gamma\text{-}C\Pi$). To put it differently, the recognition of Θ makes the decision-maker believe that if x_k counts as y_4, then it counts as y'_1 and y'_3, and that by doing x_k, he does y_4, and thus y'_1 and y'_3.

Consequently, deliberation is interpreted as a process that enhances normative awareness. It is a sufficient condition for conflict resolution to exist that the decision-maker is aware of his own desire-independent reasons to act so that he can consistently apply them to interpret the decisional situation. In other words, provided that the individual is able to use practical reasoning, he may find among his value assumptions one that solves the initial conflict and makes him aware of a state of the world in which he can coherently satisfy all his commitments. To summarize, in the initial situation t^1 we have a certain level of awareness α^1. With α^1 the decision-maker believes that $\Gamma\text{-}C\Pi$ and, as a consequence, $y_1 \text{XOR} y_3$. After deliberation, in a second period t^2, awareness increases and he realizes that there exists a value Θ such that $\Theta \rightarrow y_4$ and, since $y_4 \rightarrow y'_1$ AND $y_4 \rightarrow y'_3$, then y'_1 AND y'_3 (and, by definition, $\Gamma C\Pi$). The dilemma concerning the application of the two originally conflicting values is solved. The awareness of Θ makes a new interpretation of the decisional situation available, and satisfying both the originally conflicting commitments becomes possible. In general terms, given the non-compatibility of two values ($\Gamma\text{-}C\Pi \leftrightarrow y_a \text{XOR} y_b$) a solution-value Θ must satisfy the following condition: $\Theta \rightarrow y^\star$, such that $y^\star \rightarrow y'_a$ AND $y^\star \rightarrow y'_b$.

5. The interactive intentionality hypothesis

The analysis of individual deliberation that has been so far developed is applied in this section to interpret the formation of status functions through intersubjective deliberation. In particular, I make the hypothesis that the kind of reasoning that leads to conflict resolution in the case of individual deliberation is analogous to the reasoning that makes normative agreements possible in the case of intersubjective deliberations. In particular, the value that solves the conflict in the case of intersubjective deliberation must satisfy the same epistemic conditions of resolutions in individual deliberations. This analogy between the individual and the intersubjective level is developed by introducing *interactive intentionality* to represent an interactive mode of practical reasoning. Without taking into consideration the specific features of the discursive procedures deployed by deliberations – which are in general assumed to reflect the argumentative rules of Habermas' "communicative action" (Habermas, 1990) – we again focus on the impact of an agreement in normative commitments on the epistemic conditions grounding its effective implementation. Thus, interactive intentionality is hypothesized as the deliberation mode through which a normative solution may emerge and change the epistemic basis of the debate in the context of multiple and potentially conflicting specifications of constitutive rules.

As discussed above, it is necessary to conceptualize modes of convergence on determined specifications of powers and purposes to understand how status functions can become the object of collective intentionality, and hence of recognition and declaration. Interactive intentionality captures the practical reasoning processes that lead to the formation of shared normative-epistemic standpoints, whenever status functions are initially subject to conflicting normative interpretations and constitutive rules are under debate. The analysis that is here developed is aimed at showing the epistemic conditions under which interactive intentionality succeeds in providing individual normative positions with *compromise* solutions to be agreed on. In particular, to develop the hypothesis of interactive intentionality, I make the example of a real historical process of status function formation: the debate concerning the

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[5]Indeed, if $\Delta \rightarrow y_2$, $y_2 \rightarrow y_1 \text{AND} y_2 \rightarrow y_3$, then $y_1 \text{AND} y_3$, and, by definition, $\Gamma C\Theta$.

first article of the Italian Constitution within the Constituent Assembly of Italy, which lasted from June 1946 until its dissolution in January 1948.[6]

A specific commission had been appointed to draft the text of the Italian Constitution, which would have been later ratified by the Assembly. Thus, it was fundamental that the proposed articles had been sustained by all the political forces involved in the discussion, so that they could reach the largest consensus in the final ratification. Palmiro and Giuseppe[7] are representatives of the two main alternative positions concerning the formulation of the first article, i.e. the constitutive rule stating what the Italian state is. Namely, Palmiro believes that it is necessary to include a reference to workers in the first article of the Constitution. He proposes the constitutive rule: "Italy is a democratic republic of workers." On the other hand, Giuseppe believes that it is not right to include a reference to any social class, and in particular to workers, in the first article of the Constitution. Thus, he proposes the constitutive rule: "Italy is a democratic republic." In other words, two alternative status function specifications are at stake. For Palmiro, Italy counts as Y_1 = "a democratic republic of workers," while for Giuseppe Italy counts as Y_2 = "a democratic republic."

These two status functions derive from two alternative political worldviews. Palmiro's communist orientation makes him recognize a fundamental status in the social class of workers. Giuseppe's liberal orientation makes him refuse the assignment of a particular status to any social class (and in particular, to workers). Thus, we can consider that the two positions differ because of the two value commitments. Palmiro is committed to value Γ that leads him to recognize a fundamental status to the class of workers and to advance the status function Y_1 ($\Gamma \to Y_1$). Giuseppe is committed to Δ, which leads him to believe in a conception of democracy that is not based on any specific social class and to advance the status function Y_2 ($\Delta \to Y_2$).

Moreover, the two discussants know that their value positions are mutually non-compatible (Γ-CΔ). Thus, they both believe that their respective status function assignments are mutually exclusive (Y_1 XOR Y_2). These beliefs affect the possibility of an agreement. Indeed, Palmiro and Giuseppe believe there is no state of the world in which Y_1 and Y_2 can be assigned to Italy at the same time. Or equivalently, they believe they are taking the constitutive decision in a state of the world in which either Y_1 can be assigned or Y_2. Hence, beliefs concerning non-compatibility of relevant values predetermine the outcome of the constitutive discussion. In this initial situation, Palmiro would not agree to any normative proposal denying the role of workers in the republic whereas Giuseppe would not agree to any normative proposal stating the prominence of any particular social class, and in particular workers. Indeed, given the non-compatibility of the two normative standpoints, Giuseppe (and symmetrically Palmiro) could reason as follows:

(1) I know that Palmiro is committed to Γ;
(2) I believe that Γ-CΔ;
(3) I believe that also Palmiro believes that Γ-CΔ, and that he believes that I believe so;
(4) given Γ-CΔ, then Y_1 XOR Y_2;
(5) therefore, if Palmiro keeps his position Y_1, I keep Y_2;
(6) given Palmiro's commitment to Γ, he keeps Y_1;
(7) then, I keep Y_2.

During the deliberation debate, Amintore, another participant of the Assembly, advanced an alternative normative definition of the constitutive rule. He realized that the value of "work" Θ (i.e. the recognition that working is a precondition for citizenship and freedom) could provide a solution to the conflict between the two positions at stake. Amintore's proposed constitutive rule was: "Italy is

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[6]The presentation that follows is a schematic one and necessarily overlooks historical, political, and juridical details, for which see Urbinati, 2017.

[7]Given the very stylized nature of the argument that follows, only the first names of the politicians involved in the debate – Palmiro Togliatti, Giuseppe Grassi, Amintore Fanfani (below) – are henceforth mentioned.

a democratic republic based on work." By referring to "work" as an intrinsic value, this constitutive rule both responded to Palmiro's claim – that workers' rights are of fundamental importance – and to Giuseppe's claim – that no social class is awarded a hegemonic position over the others. Amintore's proposal obtained the consensus of the Assembly on March 22, 1947 and the largest majority (almost 90% of the 515 voters) in the Parliament approved the text of the Constitution on December 22 of the same year. It is nowadays still in force, and it is constantly referred to (and discussed again) whenever proposals to reform work laws or the Constitution itself are advanced.

Acknowledging the normative value of "work" provides a definition of the status function Y_3, which satisfies the normative claims contained in the two original positions, whose semantics accordingly changes. In other words, under the light of the acquired awareness of Θ, Palmiro and Giuseppe realize that $Y_3 \rightarrow Y'_1 \text{AND} Y_3 \rightarrow Y'_2$. The new constitutive rule acts as a meta-ethical and semantic premise for both the conflicting claims, so that supporting "work" now means supporting the working class ($Y_3 \rightarrow Y'_1$), but also means being in favor of no particular status assignment to any social class ($Y_3 \rightarrow Y'_2$). Accordingly, the original normative standpoints are now perceived as compatible ($\Theta C \Gamma$ AND $\Theta C \Delta$).

Therefore, the whole decision context changes, and Palmiro and Giuseppe both believe to be in a state of the world in which, if Y_3, then $Y'_1 \text{AND} Y'_2$, i.e. if they accept Y_3, both their interpretations of the status function can be jointly implemented. In other words, Giuseppe and Palmiro believe that there exists a state of the world in which their two original statements concerning the status function specification can be simultaneously and truly assigned to the Italian state. Thus, Palmiro (and Giuseppe, symmetrically) could reason as follows:

(1) I know there exists a Θ such that $\Theta C \Gamma \text{AND} \Theta C \Delta$;
(2) Θ specifies a status function Y_3 such that $Y_3 \rightarrow Y'_1 \text{AND} Y_3 \rightarrow Y'_2$;
(3) hence, if Θ, then $\Gamma C \Delta$; and if Y_3, then $Y'_1 \text{AND} Y'_2$;
(4) I believe that also Giuseppe is aware of $\Theta \rightarrow Y_3$, and that he believes that I am aware too;
(5) if Giuseppe accepts Y_3, I accept it too because it satisfies my original normative commitment to Γ and it makes us overcome the conflict of the first stage of the discussion;
(6) I know that, for the same reasons, Giuseppe would accept Y_3;
(7) then, I accept Y_3.

A constitution game

Point five of the latter reasoning suggests that the emerging solution Y_3 could prove to be self-enforcing in the constitution debate, provided that the discussants develop a preference for overcoming the initial conflict. To make sense of this, let us introduce a very simple game theory argument that has the single purpose of intuitively illustrating how normative agreements obtained through interactive intentionality have the power to change the decisional situation so that the payoffs connected to the possibility of an agreement are affected. Our constitutive process can be depicted through the following "constitution game" (Table 1), where for each player $d < c < b < a$, and α is a binary variable that represents *normative awareness* and takes value 1 when the decision-makers are jointly aware of the existence of a solution-value Θ, and 0 when they are not.

Giuseppe (the row-player) and Palmiro (the column-player) can either accept the other's position or not, keeping to their own. The two steps of the interactive deliberation are illustrated in Tables 2 and 3, which provide a numerical example, where $a = 10$, $b = 8$, $c = 5$, and $d = 2$. In the initial situation (Table 2), the respective value commitments make them mutually believe that $Y_1 \text{XOR} Y_2$. Thus, they are not aware of any possible solution to their normative conflict ($\alpha = 0$) and consequently they are not receptive to any kind of compromise. Indeed, both the *unilateral compromise* – in which only one discussant accepts entirely the position of the other by renouncing his own (solutions A, K and K, A) – and the *bilateral compromise* – in which each discussant accepts (at least in part) the position of the other provided that the other does the same (solution A, A), takes the value 0 for both of them. In this situation, keeping one's position is dominant for both Giuseppe and Palmiro. Therefore, the

Table 1. Effects of normative awareness on constitutive agreements, generalized form

	Accept the other's position Y_2	Keep one's own position Y_1
Accept the other's position Y_1	$a_i\alpha, a_j\alpha$	$c_i\alpha, b_j$
Keep one's own position Y_2	$b_i, c_j\alpha$	d_i, d_j

Table 2. Numerical example, $\alpha = 0$ and $Y_1 \text{XOR} Y_2$

	$A\ Y_2$	$K\ Y_1$
$A\ Y_1$	0, 0	0, 8
$K\ Y_2$	8, 0	2, 2

Table 3. Numerical example, $\alpha = 1$ and $Y_3 \rightarrow Y_1' \text{AND} Y_3 \rightarrow Y_2'$

	$A\ Y_2'$	$K\ Y_1$
$A\ Y_1'$	10, 10	5, 8
$K\ Y_2$	8, 5	2, 2

deliberation process ends up in the Nash equilibrium (K, K) in which no agreement on the first article of the Italian Constitution can be reached.

However, when they become aware of the solution-value $\Theta \rightarrow Y_3$, which makes them both believe that $Y_3 \rightarrow Y_1' \text{AND} Y_3 \rightarrow Y_2'$, the possibility of accepting some compromise acquires a positive value for both of them because in the interpretation provided by Y_3 the other's position proves to be admissible and each discussant may agree with the other without renouncing his original claim (Table 3, where $\alpha = 1$). In particular, the bilateral compromise (A, A) is preferred by each of them to the unilateral (K, A) and (A, K) because now they can assign a positive value to the possibility of reaching a shared consensus (while keeping on satisfying the respective original commitments). Accordingly, since now they both recognize the legitimacy of the new interpretation of the other's position, they both prefer to avoid the conflict (K, K) in favor of a unilateral compromise: (A, K) and (K, A) respectively. In other words, given Y_3, the discussants can develop a preference for shared solutions and accordingly for avoiding conflict. Consequently, accepting the other's position by accepting Y_3 becomes dominant. Therefore, once interactive intentionality is successful it changes the payoffs in such a way that the solution (A, A) becomes the only Nash equilibrium and the agreement upon Y_3 is self-enforcing.

6. Conclusions

If we look up the definition of "compromise" in the dictionaries, it commonly stresses the circumstance that each party has to at least partly renounce to its claim and make concessions in order to make agreements. This type of definition overlooks the normative and creative power that is inherent in the etymology of the word. From the Latin "com-promittere," "promising together," the original meaning suggests that whenever a compromise is reached something new is created, and it binds the parties who have participated in building the new conditions for the agreement. The hypothesis of interactive intentionality renders this meaning by interpreting compromise-making as one fundamental mode of institutional formation.

To account for how interactive intentionality can affect the epistemic basis on which agreements on constitutive rules are obtained, deliberation has been considered as a recursive procedure of justification that ends when a value solving non-compatibility provides a sufficient reason. Accordingly, deliberation has been modelled as a process of awareness achievement, since it covers the passage from a state in which the decision-maker is not aware of the existence of the value that solves non-compatibility to a state in which he is aware of it. Through interactive intentionality, with its passage from one state to the other, the normative interpretation of the agreement options changes and points to a potentially self-enforcing, shared compromise. Once the process of awareness achievement is successful the compromise will constitute a new basis for individuals' normative commitment and for rule following in further interactions.

The phases in which constitutive rules pass through debate appear crucial in the political life of institutions. Far from being exceptional moments, these phases represent ongoing processes that continuously constitute social reality. In other words, even if there may be one-off, punctual declarations, they are the result of an ongoing evolution in the political debate that does not end with the declaration, but continues with the re-discussion of normative powers and purposes. This means that status functions are never *given* – i.e. already identified as a defined object for recognition, acceptance and joint commitment – but subject to continuous processes of formation. Allowing for variety in the alternative specification of status functions and studying the modes of formation through intersubjective deliberative processes do not count as a confutation of social ontology – and neither, least of all, do they count as its reduction to some equilibrium notion. On the contrary, only by acknowledging the ongoing processes through which institutions emerge from variety can we account for how social ontology comes into existence.

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