

Logic and Human Practices

JAROSLAV PEREGRIN¹

Abstract: What, outside of our logical theories, makes us believe that the theories are reliable, and what is it that warrants them? What I propose is that it is just our argumentative practices; that logic is a theory of the practices in a sense similar to (though not the same as) that in which physics is a theory of the antics of spatio-temporal objects. Critics object that this approach would degrade logic to something on the level of etiquette, insisting that the laws of logic are absolute and hence independent of any parochial human practices. This paper argues that once we understand the true nature of our *practices* (such as that of argumentation or drawing inferences), our suggestion becomes feasible. What we must understand is that the practices consist not only of moves (like giving reasons or drawing inferences), but also of consonant assessments of (or the assuming of "normative attitudes" toward) such moves.

Keywords: normativity of logic, practices, normative attitudes, reliability of logic

1 What are logical theories about?

Pursuing logic, we produce various theories; and it seems that in this enterprise we have been quite successful. To date, our logical theories are plentiful; we have revealed various logical laws (such as, e.g., *modus ponens*, or *disjunctive syllogism*) and we know a lot about deduction, proofs, models etc. Not everything our theories state (and especially not all the laws stated by them) is universally accepted and some theories are hotly debated, but nevertheless we usually do not doubt that our logical pursuit has substance.

One of the main tasks of logic is to help us ensure the reliability of our theories concerning the world around us; yet how can we be sure that the theories of logic themselves (and the laws they pinpoint) are reliable? This is a question of what Schechter (2013, 2018) aptly calls the "reliability challenge": what, outside of our logical theories, makes us believe that these

¹Work on this paper was supported by the grant No. 20-18675S of the Czech Science Foundation.

theories are reliable, and how do we confront them with it? When we produce theories of nature, we also cannot be always sure that we are not mistaken and that the theories are reliable, but we know how to confront them (and the putative laws of nature incorporated in them) with reality, and thereby confirm or disconfirm them. Thus, if our theories of the world are misguided, we are likely to notice a discrepancy which will reveal our mistake. Do we have some similar "reality check" for the theories of logic?

We may think that as logic cannot just "float free in the void", there *must* be an anchor and hence a "reality check" – and if it cannot be found in the real world, it must be sought somewhere beyond it, perhaps in the transcendental depths of our minds, or in a supernatural realm accessible only via some peculiar ability of our minds (such as the *intellectus*, which, as Aquinas put it, "reads inside" things²). Just as what we see in the real world may confirm/disconfirm our physical theories, so our logical theories may be confirmed/disconfirmed by what we see, though now not in the real world, but rather in some peculiar world which we are able to see with our "inner eyes".

Schechter (2013) himself concludes that we need an *objective* domain with which the laws of logic are to be confronted. The objectivity, according to him, manifests itself in certain principles, involving the claim that "the truth of logical truths and the falsity of logical falsehoods do not depend ... on our thoughts, language, or social practices" (pp. 214-5). Hence we are to pursue a domain which is independent of what we, reasoners and players of the game of giving and asking for reasons, do, and which thus grounds logical truths in an absolute sense.

This picture is seductive and difficult to subvert (though it is often disregarded that it is equally difficult to underpin). But we must remember that logic is also closely connected to certain forms of our discursive practices, to overt reasoning and argumentation. Hence, cannot these mundane phenomena provide a reality check for logic less esoteric than the "facts" to be found beyond the real world?³ I am convinced they can, and hence that the theories taking the reality check for logic to consist in a confrontation with some unworldly reality are unnecessary⁴; we can make do with a thoroughly naturalistic explanation.

²Aquinas (1882, VI lect. 5 n. 1179).

³This would help us classify logic as one of the ordinary sciences and vindicate its "non-exceptionality" in the sense of Hjortland (2017).

⁴This view of the subject matter of logic reveals some surprising parallels between logic and natural sciences – see Peregrin (2019).

Logic and Human Practices

What I think stands in the way of this is our frequent misunderstanding of the nature of these human practices. What we must appreciate is that our discursive practices are essentially *rule-governed* in the sense that they *incorporate* their rules; and that what can serve as the reality check for us are not the data detailing which moves people, as a matter of fact, carry out, but rather which moves they *hold for correct*. In the case of the inferential practices targeted by logic our reality check is then constituted not by the inferences people, as a matter of fact, draw, but by the inferences they take to be correct.

2 The normativity of practices

That there are senses in which some human practices, such as reasoning or argumentation, are "rule-governed" is assumed to go almost without saying, at least since the "rule-following discussion" fanned especially by Kripke (1982)⁵. The problem, however, is that the senses of this rule-governedness are numerous and some of them are quite esoteric as the conceptions of logic questioned above. In contrast to this, I want to present a very down-to-earth and transparent account of the rule-governedness of our practices, which, I am convinced, we must take into account to understand what our theories of logic must rest on.

The rule-governedness I have in mind consists in the fact that such practices constitutively involve certain consonant assessments, by their practitioners, of the actions which constitute their substrate. Thus the practice of drawing inferences⁶ consists not only of the moves from premises to conclusions, but rather also from the ever-present attitude of taking some of such moves for correct and others for incorrect – just like the practice of playing chess consists not only of moving pieces across the chessboard, but also of holding the ever-present attitudes of taking some of such moves for correct and others for incorrect.

The fact that the assessments, which we may call, borrowing a term from Brandom (1994), *normative attitudes*⁷, are consonant, i.e. that different people tend to take the same kinds of moves for correct, may be seen to constitute an implicit (social) rule. As Wittgenstein taught us, not all rules

⁵See McDowell (1984); Goldfarb (1985); Boghossian (1989); Haugeland (2000).

⁶Aka giving reasons, as part of the public practice of argumentation.

⁷Brandom presented an extensive theory of normative attitudes, but he was not the one to coin the term. It is used, for example, by Hart (1961).

can be explicit, the explicit ones must ultimately rest on implicit ones⁸; and the situation when the assessment of correctness by individual members of a society comes to resonate with most of the other members provides for the existence of precisely such an implicit rule, at least in a rudimentary form. Hence the most basic level of rule-governedness of human practices consists precisely in the presence of such consonant assessments⁹.

This is to say that the rules which govern practices such as argumentation are not simply in the eye of a beholder, but are part of the practices themselves (though often just an implicit part). Thus, they are not merely items of the toolbox of the theoretician, they are already part of the subject matter of their theories. Our inferential practices consist not only of drawing inferences, but also of evaluating the correctness of others' (and one's own) inferences. (These two components may come apart - we may realize that an inference we have drawn was not correct.) More generally, distinctively human kinds of practice encompass rules as their integral parts. These practices consist not only of "doing things", but also of monitoring and regulating how the things are done, i.e. also of "doings targeting the first-order doings".

3 Absorbing "the meta"

To elucidate this peculiar feature of human practices, let us look at them from a different angle. Imagine a behavioral pattern displayed by some animals; e.g. a flock of hens rushing out of a henhouse looking for food. From our viewpoint (though, presumably, not from the hens') there is a "metalevel" to this behavior. On the "metalevel" *we* (though not *they*) can describe their behavior, we can take it for "correct" (measured by our aims) or "incorrect", and we can attempt to regulate it. (We can open the doors of the henhouse at

⁸See Brandom (1994, §I.2.4); see also Peregrin (2014, §4.1).

⁹It is worth noting that this, as documented by the increasing number of reports of the scientists targeting human ontogeny, is not just a philosophical speculation. The fact that "a person establishes a social reference group [who] evaluate and demonstrate approval or disapproval, even if the behavior in question does not affect them directly" (Castro, Castro-Nogueira, Castro-Nogueira, and Toro (2010, p. 353)) is becoming a common observation. As Schmidt and Rakoczy (2019) summarize their long-term research, "young children develop normative attitudes toward a variety of different acts in different contexts. They enforce social norms as unaffected third parties, suggesting that they take an impersonal perspective regarding norms and understand something about the normative force and generality of norms. ... Hence, early in ontogeny human beings start developing into normative beings and care about upholding shared standards, which suggests some attachment to their cultural group beyond strategic motives". Findings concerning the crucial role of normativity for human ontogeny are reported also by other empirical studies (but to analyze this in detail is a topic for a different paper.)

Logic and Human Practices

certain hours, prepare food for the hens at certain places etc.) The existence of the "metalevel" is given by the fact that we humans can assume certain attitudes towards the behavior of the hens, we can report it or try to influence it.

Of course, the same happens if the animals displaying the basic level pattern are us, humans. However, in this case it can happen that those who display the attitudes on the "metalevel", who display a "second-order" behavior targeting the "first-order" one, are *the same* humans as those who display the "first-order" behavior. In this case the whole pattern, consisting of the two levels, becomes what we can call *self-reflective*. And the thesis which I defend here - and the appreciation of which I am convinced is crucial for understanding both reasoning and our theories thereof, including logic - is that human practices are characterized by being self-reflective in this sense.

In other words, while any behavior of animals (or, for that matter, "behavior" of inanimate things) can be described on a meta-level and regulated from without, what we call human practices already *incorporates* the meta-level, they are regulated from within (hence: self-regulated)¹⁰. To become a competent practitioner of the human language games, *viz.* a speaker of language, for instance, the speaker, apart from becoming able to produce appropriate "languagings", must also, as Sellars (1974, p. 424), puts it, "acquire the ability to language about languagings, to criticize languagings, including his own". Similarly, Brandom (2000, p. 20ff.), stresses that it is the self-reflective quality of our human conceptual activities that enables us to put the rules that regulate them into words, and thereby become "semantically self-conscious".

4 What is a practice?

In her attempt to solve the challenge posed by Kripke (1982), Ginsborg (2011) invokes what she calls "primitive normativity", which amounts to the fact that we hold some acts for correct as a matter of primitive fact, and not as a result of any conscious application of a rule. "Thus," she writes, "your disposition is not just to say '125' in answer to '68 plus 57,' '126' in answer to '68 plus 58,' and so on; it is also, in each case, to take what you are saying to be the appropriate response to the query. You are disposed not

¹⁰The term "self-regulation" is used, e.g., by Tomasello (2019). An interesting problem, which, however, goes beyond the scope of the present paper, would be to research a possible connection between this kind of self-regulation and what some authors call the "self-domestication" of *Homo sapiens* (Wrangham, 2019).

only to respond with a number which is in fact the sum, but to consider that particular response appropriate."

I think that the "primitive normativity" Ginsborg is urging here is the kind manifested by the "normative attitudes" urged above. When we carry out the additions, there are *two* things in play: not only the disposition to produce the results, but also the disposition to take the results as adequate or correct. It is crucial to stress that the normative attitudes' being "primitive" involves their being nothing like propositional attitudes, and not being based on an appreciation of rules or meanings. On the contrary, these attitudes *underlie* all rules in general, and the linguistic rules that underlie meanings in particular. It is a feature of us humans that we have developed these idiosyncratic behavioral patterns (which I tend to call practices) involving these pro- and con- attitudes to the behavior.

Hence in this sense, Ginsborg's proposal is wholly in the spirit of our approach. But there is an important difference: it renders the responses of a person correct or incorrect because of the existence of the corresponding normative attitudes of the *very same person*. This, I think, stems from the conviction of the author that counting is primarily an individual, mental activity. The same would hold, according to many authors, about reasoning. But this assumption, I am convinced, is mistaken, and it blocks us from arriving at an adequate understanding of human practices.

The point is that practices such as counting and reasoning cannot evolve as purely private, because a public dimension is in their very essence. This is not to say that an individual, independently of a society, cannot have evolved some technique of classifying groups of objects according to their numerosity, or a technique to estimate what will be the case if something else is the case; but it is to say that to make this into fully-fledged counting or reasoning the individual needs a society, because it is only within the context of a society that the practices can acquire the normative dimension which qualifies them as being the distinctively human ("self-conscious") practices.

It may seem strange that something as essentially mental as reasoning would have evolved not in the mind but in the arena of the intersection of many minds; however, current research is bearing this out. Most forcefully it is put forward by Mercier and Sperber (2011, 2017), who argue, I think rightly, that private reasoning is secondary to public argumentation, rather than the other way around. This is of a piece with the recent trend to see the human mind as much more a social product than used to be usual (see, e.g. Tomasello (2014)).

Logic and Human Practices

Hence I think that to understand the practice of reasoning, which is the subject matter of our logical theories, we must accept that it involves normative attitudes, but not merely the normative attitudes of a subject to her own inferences (as Ginsborg insists). Rather, we must accept that the very practice, along with so many of other distinctively human practices, presupposes assuming such normative attitudes *to each other*. It is this kind of mutual assessment that constitutes the practices as such and gives them their essence.

From this viewpoint, the conception of practices presented here is close to that of Rouse (2007), according to which "a performance belongs to a practice if it is appropriate to hold it accountable as a correct or incorrect performance of that practice." This, I am convinced, is the key; and of course it follows that each of the participants also assesses their own performances as correct/incorrect, as assumed by Ginsborg. Thus the essence of practices of this kind consists in what Rouse calls "the mutual accountability of their constitutive performances".

5 Wright on inferential practices

I think that the full appreciation of the nature of human practices lets us resolve some vexing problems concerning the nature of logical theories, especially concerning their descriptive versus normative character. Let us consider how the question concerning the relationship between our logical theories and our argumentative practices was posed by Wright (2018). He asks: "What is the relationship between our basic inferential competences and logic as an explicit scientific-theoretical subject?" And his answers runs as follows (pp. 426-7):

There is a possible, perfectly reputable scientific project which would consist in the attempt to codify and systematize our actual deductive inferential habits. This would be an empirical sociological project. It would stand comparison with empirical linguistics or the attempt to write up the rules of Chess, say, in a scenario where the game continued to be widely played in a community—perhaps among the descendants of a small number of survivors after a nuclear holocaust—but where no explicit statement of the rules and object of the game had survived. But to think of logical theory on that model ignores the point that logic, as usually conceived, is a normative science. Its project is

not, or not merely, the systematic general description of actual inferential practices but the development of theory that is apt for the evaluation of those practices, a theory at least part of whose brief is to constrain our judgements about what follows from what, about which are good inferences and which are bad, and why.

The picture Wright presents to reject it, the picture of logic as "codifying and systematizing our actual deductive inferential habits" is quite similar to the one we are proposing and defending here. Hence can our proposal, stating that what makes logical theories correct/incorrect are our argumentative practices, be defended against Wright's criticism? Can we contravene the objection that it rids logic of its normativity, which is its *sine qua non*?

I think that in the light of what has been presented above the criticism can be shown to miss its point. The first thing to note is that the project as Wright describes it, the project "of codifying and systematizing of our actual deductive inferential habits" (just like the project of codifying post-nuclear chess) *does* have a "normative dimension". The point is that our inferential practice (just like chess and many other things we humans do) is rule-governed in the sense discussed above; and the core of "codifying and systematizing it" is capturing its *rules*.

This is quite obvious in the case of chess (be it "post-nuclear" or whatever). There is no chess without rules. It is not that without rules it would be an incomplete or impoverished or rudimentary chess – moving pieces of wood over a chessboard in the utter absence of rules would have nothing to do with chess at all. Note that this is not to say that we need *explicit* rules – what we need is that moves are consonantly assessed as correct or incorrect. And what I claim is that in this respect, our deducing and inferencing, our practices of reasoning and argumentation, are like chess: they are "rule-governed games", not necessarily in the sense that they would be governed by *explicit* rules, but in that their integral part are ongoing consonant assessments of their moves as right or wrong. No moves from thoughts to thoughts, or from sentences to sentences, would be derivations or inferences if they could not be carried out correctly or incorrectly. And no comprehensive "codifying and systematizing" can leave out this part of the practice.

True, the fact that rules are already a part of the *subject matter* of logic (rather than a merely a matter of its outcomes), does not yet make it normative. Admittedly, it might be that it yields us a pure *description* of the rules, disengaged statements that certain communities, as a matter of fact, ac-

Logic and Human Practices

cept/uphold/follow certain rules. But this is not what logic, as it is standardly pursued, does: logic aims at rules that are binding (also) *for us*. Therefore, logical theories are not construed as merely descriptions of rules, they are construed as their "explicitations" - they do not only state that the rules hold for somebody, they present, in an explicit form, rules which are to be followed.

Wright stresses that logical theory should be "apt for the evaluation of those practices" (p. 427). In one sense, then, the descriptive enterprise already is – in so far as what it captures are rules, it can be seen as an explicit articulation of the means of such evaluation, of criticism of individual inferential moves people make – it can classify them as correct or incorrect in the sense of respecting or violating the rules.

To be sure, there is a secondary level of normativity, the level which allows us to criticize not only the inferential moves of the practitioners, but to a certain extent even their rules. This happens when we identify the rules implicit to their practices, make them explicit, streamline and polish them (usually during a process of zooming in on a reflective equilibrium – see Peregrin and Svoboda (2017) and use the result as an explicit norm which allows us to correct and rectify individual normative attitudes and hence the implicit rules. Giving the project this, second, normative dimension makes logic into something ultimately more than purely a descriptive project.

6 Logic and etiquette

But there is one more objection that follows from Wright's considerations, the objection that logic understood in the way we propose degrades logic to something like etiquette. Again, as Wright puts it, commenting on such a view: "If there is normativity involved, it is a normativity broadly comparable to that of rules of etiquette. 'That's not how it is *done*.' It is possible, but intellectually hugely unattractive, to take such a view of logic. The normativity of logic, we think, is an altogether more substantial matter ..." (p. 427). Is it? There is no doubt that there are serious differences between logic and etiquette and that there is a sense in which logic is much more important than etiquette. However, does the difference consist in the baseline normativity involved?

Compare the rule that we should greet each other in the morning with the rule of *modus ponens* (hereafter MP). It seems that whereas violating the former rule just means breaking with some local customs, in the latter

case a violation is much more substantial: it has nothing to do with any local habits, it seems to be breaking with something indisputably objective and crucially important, perhaps rationality. In short, rules of logic, unlike rules of etiquette, seem to be *absolute* – and nothing short of the absoluteness seems to be able to assume their role. But I think this is disputable.

What exactly is a rule like MP? It tells us that we may derive a consequent of a conditional from the conditional itself plus its antecedent. This much is quite clear; but what, exactly, is a conditional? A conditional, in a typical case, is a thought, a proposition or a sentence, consisting of an antecedent, a connective that we can call *implication*, and a consequent (where the antecedent and the consequent are of the same kind as the whole conditional, i.e. a thought, a proposition or a sentence). But what makes a connective into an implication? How do we identify it? Not, it would seem, by its look: in the case of linguistic expressions, we know their look cannot tell us anything about their meaning nor of their functioning; and in the case of a part of a proposition or a thought, it is not even clear what it would mean to talk about their "look".

Therefore, it would seem that the only way to identify an implication is in terms of its *function*, on the basis of what it *does*. How can we specify its function? Hardly without mentioning MP or something very close to it. For example, if we characterize implication in terms of the usual truth table, then we say, *inter alia*, that a conditional is false if its antecedent is true and its consequent is false; i.e. that if the conditional and its antecedent are true, its consequent is bound to be true too.

From this viewpoint, MP would seem to say that if we connect two thoughts or propositions by a connective that produces MP-obeying conditionals, then the result will obey MP. And this triviality, of course, cannot be the important law of logic we all cherish! So if we do not want to accept that we are all under a mere illusion that there is such a law as MP, we must construe it in a different way. Since identifying implication in a functional way appears to render MP trivial, we must present it as something identified not in terms of its function. But it seems that if we consider something as "Implication" (note the capital) as an abstract object, then it will be *incurably functional* – the only thing all items classified as implications have in common is their function, so the corresponding abstract cannot but just consist of the function. And the claim that *this kind of entity* has the function of implication is thus bound to be trivial¹¹.

¹¹See Peregrin (2010).

Logic and Human Practices

What, however, may be a non-trivial fact is that a specific item, like the horseshoe of classical logic, or the *if-then* of English, does, as a matter of fact, function like implication, i.e. that it, *inter alia*, obeys MP. And if MP is construed in this way, the barrier between the rules of logic and those of etiquette breaks down. In both cases, we have 'That's not how it is *done*' ('That's not how *if-then* is used in English.')

Let me stress, once more, that this is not to say that there is no substantial difference between etiquette and logic. The roles of the two enterprises within our coping with the world may be very different, and likewise their levels of importance for us. The point is only that the difference is not a matter of the former enterprise being local and human-made, while the latter is global and human-independent. Once we realize that MP may have non-trivial content only with a *specific* sign in place of implication, we can see that it too is bound to be local and human-made. It is a rule for the usage of a cultural tool.

One way to describe the situation that MP is, essentially, a prescription for handling an item (which we call implication, like the horseshoe or *if-then*), is to compare it with the rule of chess stipulating that the bishop moves only diagonally. This is also prescribing us how to handle an item (a bishop). And just as the chess rule is nontrivial because it does not tell us merely that an item that obeys it, i.e. one that moves only diagonally, moves only diagonally, but rather that it is a certain specific item (perhaps a piece of wood at which I point) that moves only diagonally, so MP tells us that a certain specific item (the horseshoe, *if-then*, ...) behaves in a certain way.

But does not MP come out of these considerations as all too cheap? It does not make us do anything, it only lets us make an item obey it. Is this not a far cry from the absoluteness that logical rules are to display – from "the hardness of the logical *must*" (as Wittgenstein (1956) would put it)? We must realize that MP as well as other logical rules are *constitutive*; and their importance does not consist in the fact that it would show our thinking a definite direction – rather it provides us with certain (extremely important) vessels that can take our thinking into spheres which were hitherto inaccessible.

MP *does* make us do something, it makes us handle an item in a specific way – but only after the item is subordinated to the corresponding rules – after it is "constituted" as an item governed by the rules.

7 Rule of logic as constitutive

So the picture to which we are converging, in outline form, is the following: we humans have developed certain "rule-governed" practices. These practices are characterized by having absorbed their "metalevel", on which they are assessed and deemed correct or incorrect. This is the result of the fact that within these practices we tend to assume normative attitudes to each other's doings. One of such practices is meaningful talk and its sub-practice is argumentation - the rules of this particular practice being what is studied by logic. No doubt all such practices have developed within the framework of evolution and, as everything in the biological world, they exist because they either proved to be adaptive, or to be piggybacking on something that is¹².

The practices of argumentation make room for *justifying* those claims that can be involved in the game. It is clear that rules which govern the game are not something which can be subject to this kind of justification. Thus, primarily the rules are "justified" in that here they turned out to be useful in the course of evolution, they are not justified in the sense that there would be *reasons* for them.

This brings us to the important point stressed above. Rules of language in general, and those of logic in particular, cannot be seen as instrumental rules, which direct us how to use concepts. Hence they are *not* like instructions how to employ a spear to kill a hare. They are more like *constitutive* rules that produce certain "cognitive gadgets"¹³. These rules constitute concepts like conjunction, negation or implication with which we can then reason. (Here any attempted continuation of the analogy with a spear would break down, for a spear cannot be produced by rules, but only by material workings.) There may be other rules instructing us how to use the logical concepts, but these are applicable only once we have already helped ourselves to the concepts, i.e. once the constitutive rules are in place.

Let us return to Schechter (2013). As we have already noted, he claims that "the truth of logical truths and the falsity of logical falsehoods do not depend ... on our thoughts, language, or social practices" (ibid.). But here it is extremely important to clarify what is meant by "depending on our thoughts, language, or social practices". Does the truth of *That walrus over there is*

¹²As for the question why we have developed them, there is an extensive literature on the evolutionary origins of language; and less extensive on those of argumentation. But see the works of Mercier & Sperber mentioned above.

¹³I borrow this term from Heyes (2018), who uses it in a slightly different, though not utterly unrelated context.

hairy depend on such things? Well, in a sense it surely does. It is true also because *walrus* means what it does in English, and what it means in English is a matter of the social practices of its speakers. But this is most probably not what Schechter wants to take into account – so perhaps what he means is "only on social facts" or "given the meanings are fixed". Well and good. What about *We tend to greet each other in the morning*? Obviously, the truth of *this* statement *does* depend on our social practices, in particular it is true because the practices are what they are. What about *We tend to infer B from A and* \ulcorner *If A then B* \urcorner ? It depends on our practices in a similar way. But it seems to be irrelevant for logic, and in particular it is a far cry from MP. Now what about: *We tend to hold it for correct to infer B from A and* \ulcorner *If A then B* \urcorner ? Again, it is true thanks to our linguistic practices, but is this relevant for logic?

If we hold fast to the absolutistic conception of logic, then it would seem that not, for our tendencies are irrelevant for what *really* holds. If we were to tend to infer *A* from *B* and \ulcorner *If A then B* \urcorner , this would not shatter the validity of MP. However, as we saw, MP is a directive for handling (an) *implication*, and our normative attitudes determine which expressions of our language (if any) are implications. An item of our language is an implication iff it obeys MP (or something very close to it) plus certain other rules. So insofar as truths of logic are to be found in natural languages, the facts about our linguistic behavior *are* relevant.

But is this not a *reduction ad absurdum* of the fact that we should see the logical truths as sentences of natural languages? Are these truths not something much more abstract? But here we face the problem we encountered above: "Implication", *qua* an abstract item, cannot but be a purely *functional* entity, and formulating MP for such an entity renders it trivial. The only way to make it nontrivial is to see it as a prescription for a *specific* item, such as a concrete specific expression of a language (perhaps a language *of thought*, but this does not rid us of the problem).

8 Laws of logic and correctness

The view that the laws of logic cannot be correct/incorrect – that they are "like etiquette" in that they can be at most useful/useless – may seem to be a non-starter. Is it not obvious that, for example, MP *is* correct, while affirming the consequent (AC) is *not*? Is it not obvious that she who argues *It rains and if it rains, the streets are wet; hence the streets are wet* argues correctly,

while he who argues *The streets are wet and if it rains, the streets are wet; hence it rains* argues incorrectly?

Yes, this much indeed is clear. However, what does this show? Well, we assume that MP, but not AC, is a rule governing the English *if-then*. Given this, the move from *It rains* and *If it rains, the streets are wet* to *The streets are wet* is correct (for it is an instance of MP), while that from *The streets are wet* and *If it rains, the streets are wet* to *It rains* is not correct (for it is an instance of AC). But this concerns the correctness of the individual moves given the rules, not the correctness of the rules.

But is it not obvious that MP is correct for the English *if-then*, while AC is not? It is obvious in the sense that MP holds for *if-then* and AC does not (minor objections, that are raised from time to time, aside). However, insofar as this is so, it is because the rule has been, as a matter of fact, associated with this English expression, not because this association would be itself correct. It is a matter of a historical contingency; we could easily imagine that this kind of sound might have to come to be used as a connective obeying AC, and not MP. In no sense is it *correct* that *if-then* has come to obey MP, rather than AC.

The fact that a connective obeys MP, but not AC, would be a necessity (rather than a historical contingency) only if it were something as an "Implication" (not just an arbitrary item which would become an implication by a deliberate stipulation or historical development, but one that is such inherently). But we saw that an inherent implication could only be an essentially functional object, an object which would already incorporate obedience to MP (rather than AC).

There is no sense in which the rules of chess are correct as they are. We know that some of them can be changed in ways that would lead us to alternative, perhaps more or perhaps less interesting games; and there are, beyond doubt, many changes that would lead to the entire disruption of the whole game, so it would not be a game at all. We might, perhaps, call those alternative rules that would lead to such disruption *incorrect*, but thus we would only use *incorrect* in the sense of *useless* (or *harmful* or *devastating* ...)

9 Normativity of logic

There are various classifications of the ways in which logic can be considered normative. Russell (2020), for example, distinguishes three such ways:

Logic and Human Practices

One is that logic directly tell us how to reason (hence that logical theory is normative by its nature). The second way is that logical theory is not normative in itself, but has normative consequences. The third is that logic does not even have, by itself, normative consequences, but can help us derive normative consequences from some normative premises. Russell argues that as a matter of fact, logic only is normative in the third, weakest sense.

Taking a different visual angle Steinberger (2019) concludes that logic can be seen as normative in three different senses, namely as articulating directives, articulating evaluations, and articulating appraisals. Leaving aside the third of the senses, Steinberger comes to the conclusion that logic is normative both in the first and the second sense.

Despite the opposing results these two studies reach, there is something that is common to them (and to a lot of other contemporary work on the normativity of logic). They consider normativity as an attribute of logical *theory*; they see the situation so that there is a domain of human activities (drawing inferences, arguing, proving, ...) and there is a theory (logic) which may or may not be telling us how we should carry out these activities. Then, of course, there is a question on the basis of which logicians can issue such prescriptions, what is the source of authority of logic. And this may lead us to the search for a domain, urged by Schechter, underlying logical claims in a similar sense in which the real world underlies empirical claims.

In contrast to this, what I argue is that rules – and hence normativity – is already inherent to the practices, and they can make the theory normative by permeating into it. This has tremendous consequences especially for understanding the source of authority of logical theories. According to this view, the authority does not come from any supernatural domain which logical laws and rules would bring to light; it comes from the (proto)rules which are already implicitly present within the practices. True, the (proto)rules are not quite definite and unambiguous, and there is some work for logical theories to make them such, and there are alternative ways to do this work, so that we can have a plurality of logics¹⁴; the practices, however, constitute as much of the "reality check" for our theories as needed.

10 Conclusion

The reality check and the warrant of reliability of our logical theories can be provided by our mundane argumentative practices; it is not necessary to

¹⁴To discuss details of this process is another story – see Peregrin and Svoboda (2017).

search for them in any unworldly spheres. The point is that our distinctively human practices are characterized by "mutual accountability", viz. by the fact that they consist not only of some "first-order" performances, but also of "second-order" *normative attitudes* taking the performances as correct or incorrect. Hence insofar as we identify rules with consonant normative attitudes, human practices incorporate the rules that govern them.

Argumentation and reasoning, which are the subject matter of logic, are such practices; and the practices incorporate the normative attitudes and hence implicit rules. And what logic is after are not merely regularities of the practices, but precisely the *rules* inherent in them. As the rules incorporated in the practices are not always quite determinate, the job of logic, along with making them explicit, is also to make them more determinate.

The basic rules logic captures are not correct/incorrect; they can at most be useful/useless (and this is usually not a property of individual rules, but rather of their systems). Also the most basic rules of logic (such as those spelled out by Gentzenian natural deduction) cannot but be constitutive; they do not tell us how to reason, they equip us with gadgets with which - or in terms of which - to reason. Just as the rules of etiquette take their part in constituting a niche in which we can feel comfortable and safe, so the rules of logic help constitute a space in which we can talk meaningfully, reason and argue.

References

- Aquinas, T. (1882). *Sententia libri ethicorum*. In *Opera omnia*. Roma: Vatican Polyglot Press.
- Boghossian, P. A. (1989). The rule-following considerations. *Mind*, 98(392), 507-49.
- Brandom, R. (1994). *Making it explicit: Reasoning, representing, and discursive commitment*. Cambridge (Mass.): Harvard University Press.
- Brandom, R. (2000). *Articulating reasons*. Cambridge (Mass.): Harvard University Press.
- Castro, L., Castro-Nogueira, L., Castro-Nogueira, M. A., & Toro, M. A. (2010). Cultural transmission and social control of human behavior. *Biology & Philosophy*, 25(3), 347-360.
- Ginsborg, H. (2011). Primitive normativity and skepticism about rules. *The Journal of Philosophy*, 108(5), 227-254.

Logic and Human Practices

- Goldfarb, W. (1985). Kripke on Wittgenstein on rules. *The Journal of Philosophy*, 82(9), 471-488.
- Hart, H. L. A. (1961). *The concept of law*. Oxford: Oxford University Press.
- Haugeland, J. (2000). Truth and rule-following. In *Having thought* (p. 305-362). Cambridge (Mass.): Harvard University Press.
- Heyes, C. (2018). *Cognitive gadgets: the cultural evolution of thinking*. Cambridge (Mass.): Harvard University Press.
- Hjortland, O. T. (2017). Anti-exceptionalism about logic. *Philosophical Studies*, 174(3), 631-658.
- Kripke, S. A. (1982). *Wittgenstein on rules and private language: An elementary exposition*. Cambridge (Mass.): Harvard University Press.
- McDowell, J. (1984). Wittgenstein on following a rule. *Synthese*, 58(3), 325-363.
- Mercier, H., & Sperber, D. (2011). Why do humans reason? arguments for an argumentative theory. *Behavioral and Brain Sciences*, 34(2), 57-111.
- Mercier, H., & Sperber, D. (2017). *The enigma of reason*. Cambridge (Mass.): Harvard University Press.
- Peregrin, J. (2010). Logic and natural selection. *Logica Universalis*, 4, 207-223.
- Peregrin, J. (2014). *Inferentialism: why rules matter*. Basingstoke: Palgrave.
- Peregrin, J. (2019). Logic as a (natural) science. In I. Sedlár & M. Blichka (Eds.), *The Logica Yearbook 2018* (p. 177-196). London: College Publications.
- Peregrin, J., & Svoboda, V. (2017). *Reflective Equilibrium and the Principles of Logical Analysis: Understanding the Laws of Logic*. New York: Routledge.
- Rouse, J. (2007). Social practices and normativity. *Philosophy of the social sciences*, 37(1), 46-56.
- Russell, G. (2020). Logic isn't normative. *Inquiry*, 63, 371-388.
- Schechter, J. (2013). Could evolution explain our reliability about logic? *Oxford studies in epistemology*, 4, 214-239.
- Schechter, J. (2018). Is there a reliability challenge for logic? *Philosophical Issues*, 28, 325-347.
- Schmidt, M. F., & Rakoczy, H. (2019). On the uniqueness of human normative attitudes. In N. R. . K. Bayertz (Ed.), *The normative animal* (p. 121-135). Oxford: Oxford University Press.
- Sellars, W. (1974). Meaning as functional classification. *Synthese*, 27(3-4), 417-437.

Jaroslav Peregrin

- Steinberger, F. (2019). Three ways in which logic might be normative. *The Journal of Philosophy*, 116, 5-31.
- Tomasello, M. (2014). *A natural history of human thinking*. Cambridge (Mass.): Harvard University Press.
- Tomasello, M. (2019). *Becoming human: A theory of ontogeny*. Cambridge (Mass.): Belknap Press.
- Wittgenstein, L. (1956). *Bemerkungen über die Grundlagen der Mathematik*. Oxford: Blackwell. (English translation *Remarks on the Foundations of Mathematics*, Blackwell, Oxford, 1956)
- Wrangham, R. (2019). *The Goodness Paradox: The Strange Relationship Between Virtue and Violence in Human Evolution*. New York: Pantheon.
- Wright, C. (2018). Logical non-cognitivism. *Philosophical Issues*, 28(1), 425-450.

Jaroslav Peregrin
Czech Academy of Sciences, Institute of Philosophy
The Czech Republic
E-mail: peregrin@flu.cas.cz