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The normativity of logic and the natural normativity of argumentation

La normatividad de la lógica y la normatividad natural de la argumentación

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RESUMEN
Este artículo defiende el estatus normativo de la lógica para el razonamiento. Para sustentar este argumento, cuestiono que la noción de lógica pueda limitarse solamente a la idea de un cálculo formal. Por el contrario, argumento que la lógica abarca el estudio de la inferencia en el lenguaje ordinario. Además, cuestiono visiones tradicionales del razonamiento que lo describen como un proceso privado y solitario. En cambio, caracterizo al razonamiento como una actividad social (Dutilh-Novaes, 2021; Godden, 2015; Kalis, 2022; Mackenzie, 1989). A partir de estas bases, exploro el concepto de la normatividad natural de la argumentación (Gilbert, 2007; Jackson, 2019). Dado que las prácticas argumentativas poseen inherentemente una dimensión normativa, sostengo que la lógica captura y representa las reglas que gobiernan esos intercambios lingüísticos. Las reglas de la lógica son las herramientas que permiten a los agentes ejercer un control normativo en sus prácticas argumentativas.

PALABRAS CLAVE: argumentación, filosofía de la lógica, lógica informal, lógica y razonamiento, normatividad.

ABSTRACT
In this paper, I defend that logic has a normative status for reasoning. To support my argument, I question whether logic can be limited to a formal calculus that establishes relations among truth-bearers. Instead, I argue that logic encompasses the study of inference in ordinary language. Similarly, I challenge traditional views of reasoning that depict it as a private process of drawing inferences. Instead, I embrace perspectives that view reasoning as a social activity (Dutilh-Novaes, 2021; Godden, 2015; Kalis, 2022; Mackenzie, 1989). From these bases, I explore the concept of the natural normativity of argumentation (Gilbert, 2007; Jackson, 2019). Since argumentative practices inherently possess a normative dimension, logic aims to capture and represent the rules that govern these linguistic exchanges. Logical rules are the tools from which agents can exert normative control over argumentative practices.

KEYWORDS: argumentation, informal logic, logic and reasoning, normativity, formal logic.

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1. INTRODUCTION

The claim that logic is normative for human reasoning has been widely accepted in the philosophical tradition without much controversy. This assumption posits that the laws of logic prescribe the way an agent must follow to reason correctly. Notable figures such as Kant, Frege, Peirce, and Carnap supported this normativity assumption. However, this assumption has been challenged in the contemporary philosophical debate despite its lofty pedigree. The argument against the normative role of logic for reasoning states, in a nutshell, that a gap exists between logical laws and guidelines for reasoning (Harman, 1986). While logic deals with logical facts, i.e., facts about abstract entities such as propositions or any truth-bearers, human reasoning involves beliefs. Notwithstanding, propositions are independent of an agent's beliefs. Thus, the laws of logic do not play any role in the psychological processes of belief formation and revision.

This paper aims to defend the normative status of logic in reasoning. To support this defence, I propose reviewing the concepts of logic and reasoning involved in this philosophical debate (Goldstein, 1988; Mackenzie, 1989). In exploring these concepts, I question whether the notion of logic is exhausted in the idea of calculus, i.e., a calculus as a set of relations among truth-bearers that make up a formal system. Conversely, logic can also be conceived as the study of inference in ordinary language. On the other hand, criticisms against the normativity assumption often stem from the traditional view of reasoning as a solitary process of drawing inferences. However, the social turn in the philosophy and psychology of reasoning has led to rejecting this traditional view in favour of considering reasoning as a social activity (Dutilh-Novaes, 2021; Godden, 2015; Kalis, 2022). Building on this line of argumentation, reasoning is a social process that occurs through linguistic interactions among agents. From these characterisations of logic and reasoning, I consider the study of argumentative practices carried out in Informal Logic. Specifically, I attend to the idea of the natural normativity of argumentation (Gilbert, 2007; Jackson, 2019). Since argumentative practices have a normative dimension, I show that logic intends to represent the rules that govern these linguistic exchanges. In this way, a close look at social reasoning processes allows us to justify a normative role of logic in reasoning on a social basis: logical rules are the tools from which agents can exert normative control over argumentative practices.

The paper is structured as follows: in the second section, I discuss one of the most well-known criticisms against the normativity assumption, namely, Harman's sceptical

challenge. I also present some difficulties in overcoming this challenge and other criticisms against the normativity assumption. In Section 3, I introduce alternative characterisations of the concepts of logic and reasoning. On the one hand, I favour a definition of logic as the study of inference in ordinary language. On the other hand, reasoning is characterised as a social activity, highlighting its cooperative nature. Moving to the fourth section, I critically analyse the idea of the natural normativity of argumentation. Within this analysis, I examine the constituent elements of this form of normativity and demonstrate the central role played by the rules of logic in this setting. Finally, I present some concluding remarks.

2. THE PROBLEM WITH NORMATIVITY

Logic has traditionally been conceived as a normative discipline that permits distinguishing between correct and incorrect forms of reasoning. Many prominent philosophers and logicians such as Kant, Frege, Peirce, and Carnap supported different arguments defending this normativity assumption. As far as is known, this was the dominant position accepted without much controversy throughout the history of logic. Nevertheless, the normativity assumption has been challenged since the end of the 20th century (Harman, 1986), with new voices joining this anti-normativity trend (Blake-Turner & Russell, 2021; Elqayam & Evans, 2011; Labukt, 2021; Russell, 2020).

Gilbert Harman set forth one of the most well-known criticisms against the normativity assumption in his highly influential book Change in View (1986). Harman begins his criticism by differentiating between inference and implication. On the one hand, inference refers to the psychological or cognitive processes that lead to revising our beliefs. In this reasoned change in view, an agent starts with a set of beliefs and, after a process of reasoning, arrives at new beliefs or abandons some of their old ones. On the other hand, implication refers to a relation among abstract entities, such as propositions or any other kind of truth-bearers (statements or sentences). Implication is a precisely defined relation stating that a set of propositions implies another proposition if it is impossible for the latter to be false if the former is true. With this distinction in mind, let us consider the example of the law of *modus ponens* examined by Harman. This logical principle states that P and P→Q imply Q. But it says nothing about beliefs or any other psychological states, nor does it say anything about what an agent should do or may do with their beliefs. Hence, logical laws are not related to beliefs. Thus, Harman concludes that logic has no particular relevance to reasoning.

In addition, to make his criticism even more forceful, Harman set out three features of human reasoning that evidence its intricate connection with logic. Firstly, inference is not cumulative. An agent who is reasoning about beliefs P and Q could accept P and P→Q, but instead of deriving Q, they could prefer to give up P or P→Q. On the contrary, logic is cumulative. Implication accumulates conclusions as propositions are always added but never removed. Hence, one of the main features of reasoning is belief revision, but apparently, there is no place for it in implication[1]. Secondly, while some logical rules, such as *modus ponens*, do not require much effort, some complex logical derivations require a great talent or even genius to follow. Thus, implication could impose excessive demands on reasoners and, because of that, be an inappropriate inference guideline. Thirdly, many trivialities follow logically from our beliefs. For example, if an agent believes P, then PvQ, PvP, Pv(PvQ), and so on, are all logically implied by the initial belief P. However, most of these consequences could be irrelevant to the agent. Hence, to avoid cluttering an agent's mind with trivialities, agents should not be compelled to believe all the consequences of their beliefs. Thus, a principle that works well for implication turns out to be inappropriate for inference.

To sum up, human reasoning has to deal with plausibility and practicality problems that are out of the scope of logic understood as a theory of implication. If there is a formal system that people cannot use because of cognitive limitations, then that system could not work as normative for reasoning. That is why Harman maintains that there exists a gap between logic and reasoning and concludes by rejecting the normativity assumption.

Over and above Harman's position, decades of empirical research in the field of cognitive psychology have highlighted that human reasoning does not reflect classical logic (Elqayam & Evans, 2011). Indeed, experimental results have shown that people's responses to deductive tasks are far from conforming to this logical theory. This situation has prompted questions about whether human reasoning should be measured against classical logic as a normative system. And even more, whether the study of human reasoning should be guided by any normative standard at all (ibidem). In this sense, a descriptivist psychology of reasoning that gets rid of any normative standards has been

[1] Regarding non-monotonic theories, Harman maintains that principles of reasoning cannot take the form of a logic. His objection hinges on the distinction between inference and reasoning, on the one hand, and implication and argumentation, on the other hand. According to his perspective, formalisms that deal with non-cumulative reasoning are ineffective in bridging the gap between logic and reasoning. Additionally, incorporating non-classical logic in the normativity debate does not simplify a response, but rather creates extra difficulties, as summarised in the so-called collapse problem (Caret, 2017).

proposed (Evans & Elqayam, 2011).

In a similar vein, the interactionist account of reason has claimed that reasoning is not the use of logic to derive conclusions. At best, logic plays a minimal or marginal role in inference (Mercier & Sperber, 2017). Although reasoning was commonly seen as applying logic or some system of rules to increase our knowledge and improve our decision-making, Mercier & Sperber have argued that reason is much more opportunistic and eclectic and does not depend on formal rules. According to them, producing reasons is not normative; it is not "properly geared to the pursuit of knowledge and good decision" (ibidem. p. 180). To make their point, these authors establish a difference between arithmetic and logic: when people do arithmetic, they apply rules of arithmetic to numbers; it does not matter if these numbers refer to horses, stars, money or cups of coffee; they just apply these rules. However, when people reason, previous knowledge, beliefs and ideological positions interfere in applying logical rules. This situation brings to light that reasoning is not a matter of logical rules application. Thus, from the interactionist point of view, logic has, at most, a rhetorical or heuristic role in reasoning: it helps to simplify intuitive arguments by exaggerating their force or to clarify questions and suggest answers.

Given this state of affairs, there appears to be no connection between logic and reasoning. On the one hand, logic is not about reasoning or inference. On the other hand, reasoning is neither the application of logical rules nor a normative activity. Was the philosophical tradition so wrong for so many years to see a non-existent relationship between logic and human reasoning? In the subsequent sections, I argue that a close examination of reasoning practices can restore the central role of logic in reasoning.

3. LOGIC AND REASONING

Shortly after Harman raised his sceptical challenge, two responses emerged that questioned the characterisations of the central notions of logic (Goldstein, 1988) and reasoning (Mackenzie, 1989) upon which this challenge was based. This section takes these two criticisms as a starting point to pave the way for dismantling Harman's challenge.

Far from being an exact, precise or unambiguous expression, logic is a polysemic notion having more than one meaning. This fact was clear at least since the Middle Ages when a distinction between two different senses of logic was widely used and spread. While *logica docens* refers to the logic taught that can be found in logic textbooks, *logica*

utens refers to the actual use of logic, in other words, to how people reason (Priest, 2014). Thus, bearing in mind the polysemy of logic, Goldstein (1988) pointed out that there is a narrow and specific conception of the idea of logic underlying Harman's position. This conception is the view of logic as the study of formal systems, which is closely related to the enterprise of logicism. According to this view, logic is a calculus, i.e., a set of expressions of a symbolic language, well-formed formulae (wffs), and a set of rules for deriving wffs from others wffs. In Harman's argument, these wffs are propositions, i.e., truth-bearers that must be either true or false. Thus, under this conception, logic is reduced to the practice of symbolic operations in a deductive system and to the investigation of the formal properties of these systems. Logic, in this sense, concerns itself with abstract entities and is devoid of any dependence on the beliefs or inferences of individuals. However, as Goldstein maintained, there is an alternative conception of logic related to real inferential practices taking place in everyday language. In this broader conception of logic, the study of ordinary reasoning carried out in natural language plays a central role as, for example, the meaning of the logical connectives is determined by the agents' inferential practices. Thus, logic deals with the rules for making correct inferences. Even though logical inquiry is concerned with principles that are articulated in terms of abstract entities, these principles originate from the inferential processes performed by agents. This alternative perspective on logic relates significantly to the philosophical position of psychologism.

Post the impact of Frege's criticisms, psychologism experienced waning support and became unpopular among the philosophical community. One of the main concerns against psychologism was the relativity and lack of objectivity that derives from founding the science of logic in individual and private mental processes (Lehan-Streisel, 2012). Since logic appears to be rooted in individual contents, it raises the possibility of content variation among individuals, thereby suggesting the potential existence of as many logics as individuals exist. Nevertheless, throughout the 20th century, some improved versions of psychologism were proposed. Goldstein (1988), for instance, posits a variant of psychologism that proposes an alignment of logic with reasoning based on the figure of an ideal reasoner. According to this proposal, the laws of logic represent a set of principles that govern the inferences of an ideal reasoner. Thus, logical laws are not generalisations of agents' actual inferential patterns but embody the norms to which an ideal rational agent adheres. Accordingly, logic functions not as a mere description of an agent's reasoning; instead, it is a prescription for the appropriate manner in which an agent ought to reason. It was argued that the relationship between these logical laws

and the actual inferential practices is similar to that between physical laws, as expressed in highly idealised scientific models, and physical phenomena occurring in nature. Hence, this account of psychologism holds that logic serves as a normative guide for reasoning by setting a standard for an ideal reasoner. Thus, actual reasoning is considered correct only to the extent that it adheres to this standard.

While this variant of psychologism may present certain advantages over earlier versions advocated during the 19th century, it nevertheless exhibits certain shortcomings that I will outline in what follows. Firstly, such an ideal reasoner does not exist. Hence, how do we acquire an understanding of the principles that direct the reasoning of this hypothetical ideal agent? Without the existence of a normative theory, it is not possible to determine the inferential behaviour of this agent. In this way, this account of psychologism becomes either circular (Lehan-Streisel, 2012) because an ideal reasoner is one whose inferential patterns conform to the normative theory and vice versa or a *post hoc* justification of the normative force of a logical theory, which may not be entirely convincing. Secondly, the analogy drawn between the scientific models of physics and the laws of logic needs to be revised. In the case of the laws of physics, what is an idealisation is the scientific model and the laws expressed in the language of that model. However, the model itself intends to represent a real phenomenon occurring in nature. In this sense, the laws of physics are idealisations of actual physical events. However, in the ideal reasoner account, the laws of logic are formal representations of an idealised way of reasoning. Thus, formal models of reasoning do not represent actual inferential practices but rather the behaviour of an ideal agent. The flaw in this analogy introduces the possibility for logic to be regarded as an idealisation of actual inferential practices. I aim to make sense of a conception of logic along this line.

A more promising variety of psychologism, known as social psychologism (Lehan-Streisel, 2012), emerged during this century due to the advances in cognitive psychology. This approach posits that logic is linked to observable performances involved in human reasoning, which can be accessed through external data, such as speech acts or experimental results. Unlike other varieties of psychologism, social psychologism does not rely on accessing private or individual mental processes to connect logic with reasoning. As a result, the limitations associated with accessing personal mental contents and the issues of relativity and lack of objectivity that arise when attempting to establish a science of logic based on such contents are surmounted. Besides, it is possible to give an account of the foundations of logic within this approach. Social psychologism holds that logic is connected to shared inferential practices in

natural language.

To complete this alternative characterisation of logic, it is essential to consider the nature of the authority that logical laws (or logical rules) exert over reasoning. One proposed distinction is between *logica dominans* and *logica serviens* as competing views about the nature of logical laws (Peregrin & Svoboda, 2022). The *logica dominans* view holds that logical laws govern reasoning independently of actual inferential practices and, as such, can only be discovered and obeyed by agents but not created or modified by them. This view suggests that logic dominates reasoning. In contrast, the *logica serviens* view argues that the laws of logic are tools or instructions that agents should follow to achieve a rational goal. In this sense, logic serves reasoning. A drawback of the *logica dominans* view is to explain how people discovered the laws of logic and used them in their reasoning practices. This drawback is another way of pointing out the gap between logic and reasoning highlighted by Harman. Thus, the *logica dominans* view leads to a dead end for justifying normativity. On the contrary, the *logica serviens* view tries to explain this connection by establishing an assistance role for the laws of logic in reasoning practices.

Having clarified the conception of logic, let us now turn to the concept of reasoning. Mackenzie (1989) has established a distinction between an internalist conception of reasoning and an externalist one and has advocated favouring the latter. On the one hand, in the internalist conception, reasoning is characterised as an internal and private process occurring within a single agent. Thus, the results of reasoning processes are private contents. As can be seen, this conception of reasoning is similar to that adopted by defenders of psychologism during the 19th century. It is also akin to reasoning conceived as a single agent forming, managing, and revising their beliefs put forward in Harman's sceptical challenge.

On the other hand, in the externalist conception, reasoning is characterised as a social process made up of linguistic interactions among different agents. Thus, reasoning processes occur in a social framework and are composed of external and observable phenomena, namely, linguistic performances. There is a close connection between this second conception of reasoning and social psychologism, as both avoid characterising reasoning in terms of private entities of difficult access and propose, instead, an approach to reasoning dealing with public content. Thus, I endorse a conception of reasoning along these lines by following Mackenzie and the social turn in the philosophy and psychology of reasoning (Dutilh-Novaes, 2021; Kalis, 2022).

In this externalist conception of reasoning, linguistic exchanges among agents make up a dialogue. A dialogue can be defined as an ordered sequence of speech acts (Reinmuth & Seiwart, 2016). These linguistic interactions aim to accept or reject certain statements, reaching a consensus with the agents involved. Hence, reasoning is a social process aimed at coming to an agreement. By putting together this externalist view of reasoning with the broad or alternative characterisation of logic as the study of inferential practices in natural language, it is possible to argue for logic's central and relevant role in reasoning.

4. THE NATURAL NORMATIVITY OF ARGUMENTATION

The idea of logic as the study of reasoning practices taking place in natural language is closely related to the spirit underlying the development and consolidation of Informal Logic. The contemporary origins of Informal Logic were motivated by the interest in studying thinking, reasoning, and argumentation in real-life contexts (Groarke, 2021). Although the historical roots of Informal Logic can be traced back to Ancient times, the beginnings of this discipline in the contemporary era coincided with a critical consideration of the aims and scope of Formal Logic. Practitioners of this emerging discipline noted that logic was too focused on developing and applying formal methods to construct formal systems and on analysing the properties of these formal systems. Instead, this new wave of logicians was interested in analysing arguments as they occur in natural language discourse, not in formal systems or using formal languages (Blair, 2015). The reader can easily see the affinity between these criticisms against the approach of Formal Logic and the narrow and specific conception of logic underpinning Harman's challenge that was noticed by Goldstein and exposed in section 3. Thus, it is worth emphasising that the broader conception of logic, connected with psychologism as discussed in section 3, is akin to the idea of logic highlighted in the field of Informal Logic.

In addition, another parallel can be drawn between this broader conception of logic and the core tenet of Informal Logic, as both aim to provide tools that agents can employ in their inferential practices. In the case of Informal Logic, one of the desiderata of this discipline was to contribute to developing tools for analysing and assessing the strength of everyday arguments and improving the quality of argument production (Groarke, 2021). Similarly, regarding the broad conception of logic adopted in the previous section, the guidelines provided by logic serve as instructions for agents to attain their rational goals. This aligns with the notion of *logica serviens*, which emphasises that logic assists

reasoning rather than imposing dominance over it.

In general, definitions of Informal Logic focus more on the study of argumentation rather than on the study of reasoning. This inclination can be attributed to the prevailing idea that reasoning and argumentation are distinct phenomena. Thus, reasoning is an internal process related to mental entities; argumentation is viewed as a public activity involving speech acts expressed in natural language. However, the externalist approach to reasoning advanced in section 3 above allows for integrating reasoning and argumentation as interconnected phenomena. Considering reasoning as a social activity (Godden, 2015), it becomes plausible to view these two activities as similar or at least strongly intertwined. This alignment further strengthens the affinity between the broader conception of logic and the fundamental principles underlying the development of Informal Logic. However, it is essential to clarify that despite the similarities between Informal Logic and the broad conception of logic, I do not argue for their reduction into a single discipline. I acknowledge that these two disciplines are distinct from each other. Nevertheless, as both study the same phenomenon, namely, reasoning or argumentative practices, I aim to argue for the normative status of logic by analysing some features of argumentation that have been extensively studied in the field of Informal Logic[2]. In particular, I focus on the so-called natural normativity of argumentation.

It has been claimed that argumentation is formed and governed by the dynamic interplay of three key components: goals, context, and ethos (Gilbert, 2007). Firstly, goals encompass the core strategic goal of convincing other agents to accept our claims and the face goals of keeping a cooperative relationship with all of the agents involved in an argumentative situation. Secondly, context refers to the specific characteristics and circumstances of the argumentative processes. It encompasses the relationships among agents, the location in which the argumentative process unfolds, and the political, economic, and social factors that come into play. Lastly, ethos has to do with our evaluations and appraisals of the other parties involved in the argumentative process as trustworthy agents whom we can rely upon. This ethotic element is one of the most essential elements of argumentation since people want to be seen as reliable, intelligent and worthy of respect. This aspect of argumentative behaviour has been extensively examined in Mercier and Sperber's (2017) interactive approach to reason. According to

[2] I am not attempting to delve into the intricate relationship between Formal and Informal Logic, nor am I trying to argue that the Informal Logic approach to reasoning is better or preferable to the Formal Logic approach. My primary aim is to highlight the fact that if we want to defend the normative role of formal logic in reasoning, it is essential to focus on the real argumentative practices carried out by human agents.

their approach, argumentation plays a crucial role in communication, as individuals argue with a dual aim. On the one hand, they endeavour to assess other agents' trustworthiness, employing argumentation to practise epistemic vigilance. On the other hand, they aim to present themselves as reliable agents whose messages and ideas hold value and should be taken seriously.

Gilbert (2007) states that the above-mentioned components comprise a normative control system over argumentation. Natural normativity arises from the interplay among these three components, establishing reasonable criteria for the argumentative process. Natural normativity has to do with social pressures coming from other agents, ourselves, and the argumentative situation. This idea of the natural normativity of argumentation has also been examined by Sally Jackson (2019). However, in Jackson's approach, natural normativity is not so much related to social pressures as it is to reasonableness intuitions that arguers have about what is and is not helpful in an argumentative setting. According to Jackson, argumentation is an interaction aimed at resolving a disagreement through a cooperative exchange of reasons. Studying argumentation as it naturally occurs in everyday life makes it possible to realise that this interaction cannot be reduced to merely exchanging reasons and claims. In an argumentative setting, agents frequently make interactions not targeted at assertions previously uttered. This is the case of the so-called "callouts", i.e., responsive speech acts not directed to what has been explicitly said but rather directed to implied or presupposed beliefs, attitudes or intentions attributed to one of the parties involved in the setting. Thus, argumentation is not restricted to asserting claims and defences. Some interactions can exceed sentences, propositions or any truth-bearer.

Despite their differences, Gilbert's (2007) and Jackson's (2019) ideas of natural normativity have to do with a normativity that goes beyond abstract logical rules and theoretical standards. In Gilbert's proposal, normative control over argumentation is exercised by social pressures rather than abstract logical rules. In Jackson's approach, a portion of the normative control extends beyond the standards of logic, which were created to evaluate claims and reasons. As a result, agents' intuitions about reasonableness constitute the core of the natural normativity of argumentation. As can be noticed, there is an underlying criticism against the capacity of logical rules for imposing an appropriate normative control over reasoning in both proposals. These criticisms concern the logical rules studied by Formal Logic and the normative standards set by Informal Logic.

Slob (2022) further strengthens these criticisms by raising questions about the

normative criteria advocated in dialectical approaches to argumentation. According to him, dialectical frameworks are not sufficient for justifying normative standards. At best, they can support what is referred to as "would-normativity", namely, a conventional normativity where agents involved in an argumentative setting willingly submit themselves to the authority of the rules. However, this type of normativity opens the possibility of an agent retracting a commitment in a decisive step of the discussion because they realise they are losing the argument. Thus, would-normativity lacks normative force in crucial situations. What is needed instead is a form of "should-normativity", namely, a normative standard that prevents agents from refusing to accept something they should accept[3]. Slob concludes by asserting that avoiding these strategic moves dialectically is impossible.

Studying argumentation in natural settings brings to light the fact that argumentative exchanges go through a series of circumstances, such as time restrictions, power imbalances among the agents, human agents' cognitive biases and computational limitations, and hidden interests of the parties involved, which significantly complicate their development (Castro, 2022). Analogously to the challenge raised by Harman regarding the adequacy of the rules established by Formal Logic as a normative guidance for reasoning, a similar situation can be observed in the field of Informal Logic regarding theoretical normative standards and real argumentative practices. As a result, some extreme viewpoints contend that theoretical normative standards have no relevance in actual argumentation and advocate for their abandonment.

Considering these factors, the analysis of actual argumentative practices further complicates the normative status of logic. However, despite what this situation may appear at first glance, a deep examination of the so-called natural normativity of argumentation fosters a defence of logical normativity. A common ground in the approaches mentioned is the depiction of argumentation as a rule-governed activity. Thus, argumentative practices are constituted and regulated by a set of rules of some kind. Both Gilbert's and Jackson's approaches appeal to extra factors outside the scope of logic (not only Formal but also Informal Logic) for constructing and supporting these additional elements. In both cases, these are dialectical elements.

On the one hand, Gilbert claims that the social pressure exerted by other agents is the essential factor of the normative force in argumentative settings. However, since this is a rational exchange, the social coercion imposed by agents cannot be through

[3] Notice that this observation made by Slob (2002) is similar to the criterion known as “obtuseness” in the discussion about bridge principles and the intrinsic normativity of logic (Cf. Evershed, 2021).

force, power, or authority. Hence, how can agents involved in an argumentative setting exercise normative influence without relying on their force or social status? My claim is that the rules of logic function as instrumental tools, empowering agents to exercise normative control over their peers. Moreover, these rules enable agents to exert control over their argumentative behaviour, that is, to evaluate their argumentative exchanges.

On the other hand, Jackson advocates for a collective intuitive sense of reasonableness that all agents hold in an argumentative setting. However, an important question arises regarding the origin of these intuitions of reasonableness. If these intuitions are indeed shared among all agents, they must be based on similar criteria for determining what is considered reasonable or unreasonable in an argumentative situation. Thus, these intuitions should be grounded on a common standard. Otherwise, different agents can hold different intuitions about reasonableness, which would undermine the possibility of rational exchange. Once again, I argue that logic serves as the core basis for supporting and guiding argumentative exchanges. The establishment of a common standard within these exchanges rests upon the existence of logical rules.

Logical rules and Informal Logic standards are the central core of the natural normativity of argumentation. While other elements, such as goals, contexts, ethos, and reasonableness intuitions, also play significant roles in this natural normativity, all of these elements can fulfil their function in an argumentative setting because all of them are clustered around a set of logical principles. The rules of logic and the theoretical standards of good argumentation studied in Formal and Informal Logic can be seen as abstract representations of the inferential moves observed in argumentative situations. Both disciplines aim to establish a justified distinction between correct and incorrect inferential moves. However, despite their abstract and theoretical nature, these rules and standards are rooted in the very essence of real-life argumentative practices. Thus, logic is normative for reasoning in a social sense: Logic serves as a regulation for argumentative settings since this is the common tool shared by all participants for assessing other agents' inferential moves. Nevertheless, logic, understood as a formal theory, does not impose obligations over reasoning, i.e., logic by itself does not dominate reasoning. The normative force of logic relies on the social influence exerted by agents, enabling them to shape their own and other agents' inferential practices through a dialectical process based on speech acts' exchanges.

Regarding the so-called should-normativity, this approach to normativity can effectively deal with criticisms challenging the capacity of logic to impose obligations in naturally occurring reasoning practices. The normative force is exerted by agents

involved in the argumentative setting. During an argumentative process, agents are committed to the goal of reaching an agreement, while peers in the dialogue assess each argumentative move or inferential step made in that setting. Therefore, if an agent refuses to accept a conclusion or inferential step that they should accept, the other agents will compel them to do so. Failure to comply raises doubts about the agent's ability to engage in rational exchange, thereby impacting their trustworthiness, ethos, and social standing. In this sense, as Peregrin (2016) stated, the ultimate source of normativity is social, and the same applies to logical normativity.

5. FINAL REMARKS

In this paper, I have argued for the normative role of logic in reasoning. I began the discussion by exposing a well-known criticism against the normativity assumption: Harman's sceptical challenge. Additionally, I addressed other criticisms that have been raised in the field of the psychology of reasoning. The subsequent step involved thoroughly exploring the central concepts of logic and reasoning. Regarding logic, I favoured a characterisation of this discipline as the study of inferential practices taking place in ordinary language. Concerning reasoning, I embraced perspectives viewing reasoning as a social activity. Within this framework, I analysed the studies made in the field of Informal Logic. In particular, I delved into the notion of the natural normativity of argumentation. This exploration provides elements to analyse the factors involved in real argumentative practices. Thus, I offered a defence of logical normativity on a social basis: Logical rules are the tools from which agents can exert normative control over argumentative practices.

It is worth mentioning that sceptical doubts regarding the normative role of logic in human reasoning have been raised not only in Formal Logic but also in the fields of Psychology of Reasoning and Informal Logic. These doubts generally argue that logical rules or normative standards are ineffective in regulating reasoning and argumentation. Consequently, if logical rules are solely understood as establishing relations among truth-bearers without any connection to real reasoning processes, the role these rules can play in reasoning becomes a mystery or, even worse, is rendered irrelevant.

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