The 'Interlog' network counts today about more than a hundred members. It was created in 2025. The Network's branches include 14 domains or sub-domains: literature, law, medicine, intellectual history, gender studies, psychology of reasoning/cognitive sciences/neurophysiology, sociology/social (and philosophical) anthropology, education sciences, rhetorics, grammar/linguistics, theology (apologetics, heresiology), disputational/agonistic practices (including martial arts), mathematics/ethnomathematics, postcolonial studies. Since many researchers in the history of logic work in departments other than philosophy departments, the 'interdisciplinary' study includes here the study of logic in 'non-Western' traditions (especially Indian, Chinese, African and Arabic-Islamic logics), but also Hebrew/Jewish and Byzantine traditions. The idea is to promote an interdisciplinary study of logic from a historical point of view, but also at the crossroads with contemporary research. The project is also crucially concerned with logical pluralism in the technical sense but also in a more general sense. In many fields, researchers have adopted and designed non-standard logics (relevant logic, nonmonotonic logics, many-valued logics, paraconsistent logic, dialetheist logic, fuzzy logic, etc.) aiming at saving the explanatory power of logic by questioning and widening its concept. In order to discuss about logic approached from so many perspectives and domains, a new way of defining logic and writing histories of logic (New Deal History of Logic') needs to be paved.

Monday 1st of June: Campus Condorcet, Conference Center, Auditorium 150 (1 place du Front pupulaire, Aubervilliers, m° Front populaire)
Tuesday 2nd of June: Conference Center, Auditorium 150
Wednesday 3rd of June: Campus Condorcet, South research building (5, cours des Humanités), Ground floor, room 33
Thursday 4th of June: Campus Condorcet, Conference Center, Auditorium 250
Friday 5th of June: Conference Center, Auditorium 250

Information et inscription :
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INTERNATIONAL COLLOQUIUM

INTERLOG FORUM I

1st-5th of JUNE 2026

PARIS CAMPUS CONDORCET

Organisation : Julie BRUMBERG-CHAUMONT (PSL/CNRS/LEM)

École Pratique des Hautes Études | PSL | LEM Laboratoire d'Études sur les Monothéismes UMR 8584 | IRN Pluralizing Logic | cnrs | University of Oregon

9h30
Julie BRUMBERG-CHAUMONT (PSL/CNRS/LEM)
'Introduction (presentation of the Forum/Interlog Network */futuralia*)'

10h15
Hélène LEBLANC (FPSE Univ. de Genève / IHRIM, ENS Lyon)
'*Dialecticae Gladius*: a History of a Practice (1300-1700)'

This presentation will outline ongoing research aimed at tracing the history of logic as an agonistic practice. Spanning a broad timeframe from 1300 to 1700, this research proceeds through a comparative study linking the practice of university logic, known as scholastic logic, with that of a total and extensively theorized social phenomenon in the medieval and early modern European world: fencing. On the one hand, I will present some results on how martial metaphors are employed in logic treatises. On the other hand, I will provide a series of examples of how logic is used and develops in treatises on fencing.

11h – Coffee Break

Panel 'The Logic of Revelation'

org. Julie BRUMBERG-CHAUMONT and Olivier BOULNOIS

Chair : Pascale BERMON (PSL/CNRS/LEM)

11h20
Julie BRUMBERG-CHAUMONT (PSL/CNRS/LEM)
and **Olivier BOULNOIS** (EPHE-PSL//LEM)
'Introduction'

11h50-12h30
Luisa VALENTE (University Roma 1)
'*Ipsa nominis interpretatio*. Abelard's Use of Etymology and Translation to Demonstrate the Identity of Logic and Christianity'

Abelard was recognised by his contemporaries as a highly skilled and passionate master of both logic and theology. From the time he reached maturity, he consistently cultivated both disciplines, although over time his interest in theology and religious life grew. One of the defining features of Abelard's thought is the conviction that there is no contradiction between practising logic and leading a Christian life, but that, on the contrary, the two go hand in hand. For Abelard, being a 'true logician' or a 'true philosopher' amount to the same thing as being a 'true Christian'. Obviously, it all depends on agreeing on what is meant by 'logician', 'philosopher' and 'Christian'. To clarify this, Abelard draws on scriptural and patristic authorities as much as on the tools – derived from rhetoric as well as logic and grammar – of etymology and the translation of names into different languages (*interpretationes*). My contribution will examine Abelard's *Epistle XIII*, the *Soliloquium*, his exegetical writings, and some texts contained in *Theologia christiana* and in his correspondence with Heloise.

12h30-14h – Lunch Break (Buffet) Mezzanine

Chair : Irène ROSIER-CATACH (CNRS/EPHE/HTL)

14h
Yehuda HALPER (Bar-Ilan/University of Chicago)
'Does a scientist who lives alone on an island need logic? The curious case of the empiricist Hayy Ibn Yaqzan according to the 12th century Arabic writings Ibn Tufayl and their 14th century Hebrew interpretation by Moses of Narbonne

Ibn Tufayl's 12th century tale of a man who grew up alone on an island in the Indian Ocean has consistently been a Western favorite, read in Arabic, Hebrew, Latin, and other European languages. Ibn Tufayl's explanation of how Hayy Ibn Yaqzan acquires knowledge, becomes, philosopher, meets, learns about, and rejects society, was, in particular, a model for Hebrew authors, like Moses Narboni and Johanan Alemanno, seeking to adapt the Aristotelian philosophical curriculum to a Hebrew environment beyond the tradition of Averroes' commentaries. Yet, while Averroes' commentaries place logic as a necessary prerequisite for studying mathematics and the sciences, Hayy only learns logic after he encounters another person and learns to speak, that is after he has already mastered mathematics, astronomy, physics, and metaphysics. In other words, according to Ibn Tufayl, there is a way to study and master the

sciences without first learning logic. This method is empirical, beginning with observation of animals, then materials, then physical principles, astronomy, and so on through metaphysical speculation about God. This method of empirical inferences is, in fact, likely based on Aristotelian notions of topical inference, i.e., dialectical reasoning. Yet, Ibn Tufayl's claim is that such reasoning can be acquired without formal logical training, through naïve thought and observation alone. This reordering of scientific study is amplified by Narboni and then Alemanno, and then introduced into Italy in the 15th century at a time when there is a brewing dissatisfaction with Aristotelian science. Thus we find numerous 15th and 16th century Jewish thinkers adopting an empiricist approach that is explicitly founded on a kind of dialectic. This method, then, may play a large part in the Early Modern restructuring of science in favor of empiricism.

14h40
PascaL LEMMEL (EPHE-PSL/LEM)
'Between Polemics and Epistemology: al Ġazzālī' s Derivation of Logic from the Qur'an'.

In the *Qisṭās al mustaqīm* (The Just Balance), the Muslim jurist and theologian al Ġazzālī (d. 505/1111) develops one of the most ambitious expressions of his epistemological project. The originality of the treatise lies in an unprecedented hermeneutical operation through which he proposes to derive syllogistic principles directly from the Qurʾān, such that rationality no longer appears as a Greco philosophical import external to Revelation, but as the immanent structure of its demonstrative discourse. This study examines the way in which al Ghazālī mobilizes these fundamental logical operations in the service of a threefold polemical aim: refuting Bāṭinite *taqlīd*, highlighting the limits of the dialectical practices of the *mutakallimūn*, and moving beyond scriptural literalism. Finally, it will be shown that although this attempt at a "Qur'anic naturalization" of logic seems to have left no direct legacy in the post Ġazzālian tradition, it nevertheless forms part of his broader effort to establish a scientific methodology in which logic becomes the indispensable *organon* of any religious knowledge grounded in certainty (*yaqīn*).

15h20 – Coffee Break

15h40
Thomas Gay (Aix-Marseille Université, AMU - Centre Gilles-Gaston Granger - UMR 7304)
'Logic and the Trinity at the Couvent des Grands-Augustins (c. 1320-1330)'

This contribution aims to shed light on the debates concerning Trinitarian paralogisms among the Hermits of Saint Augustine (OESA) in Paris. The solutions put forward by these friars remain largely overlooked in the literature, even though some of them defend a position similar to that of Strelley and Holkot, distinguishing between Aristotelian logic and *logica fidei*. More precisely, around 1320, several members of the Order – Gerardo da Siena and Bernat Olivier, both then Sententiary Bachelors – argued, for different reasons, that principles of logic are inapplicable to revealed truths, while remaining valid when used to demonstrate what is accessible to reason about God. In this paper, I focus in particular on tracing the networks of logical and metaphysical arguments developed by the aforementioned Augustinians to defend this thesis and to avoid the risk of inconsistency, as well as on the criticisms it provoked in the 1330s, when the principal involved figures were back in Paris, serving as regent masters at the Convent

16h20-17h30
Roundtable with the speakers, Pascale Bermon (PSL/CNRS/LEM), David Lemler (Paris Sorbonne University/LEM), Daniel de Smet (PSL/CNRS/LEM)

18h-19h30 – Welcome Cocktail

Panel 'Concepts and Forms of Logic'

org. Erich RECK

Chair : Claude ROSENTAL (CNRS/EHESS/CEMS)

9h30
Erich RECK (University of California, Riverside)
'Introduction'

10h
Michael BEANEY (University of Aberdeen)
'Chinese Graphic Logic'

In this talk I shall explain how the uses of Chinese characters – or graphs – have their own logic, which we need to understand in making sense of argumentation in Chinese philosophical texts, especially ancient texts such as the *Zhuangzi*. Chinese characters exist in a complex graphical space of interconnected meanings, the use of any one often invoking, implying, and intimating many others. Graphic logical analysis thus requires a combination of decompositional and connective analysis.

10h40
Sébastian GANDON (Clermond-Ferrand University)
'Logical Analysis and Cultural Differences'

Early analytic philosophers believed that the 'new' quantificational logic could solve certain philosophical problems inherited from the tradition. But which traditions were they referring to exactly? Can logical analysis be applied in the same way to English idealism and Chinese Confucianism? My talk aims to highlight largely unexplored corpora that enable such questions to be studied from the perspective of a historian of philosophy. In particular, I will discuss the attempts by Feng Youlan and Jin Yuelin to use mathematical logic to revitalise Neo-Confucianism in the 1930s and 1940s.

Tuesday 2nd of June
Conference center
Auditorium 150

11h20 – Coffee Break

11h40
Erich RECK (University of California, Riverside)
'The Concept of Logic'

In recent attempts to broaden and deepen the study of logic, including in cross-cultural, cross-disciplinary, and thorough historical ways, the term "logic" has been used in a number of related but different ways. In this talk, I will provide a systematic clarification and orientation in that respect, by exploring various aspects or dimensions of the concept of logic. This will include logic in narrower senses, where it has to do with certain forms of reasoning, and in a broader sense, where it concerns a related kind order or structure. It will also involve logic as a discipline, subject, matter inferential system or systems, mental process, practices, etc.

12h20 – Lunch break (Buffet), Mezzanine

Chair : Erich RECK (University of California, Riverside)

14h
Francesco BELLUCCI (Bologna University)
'Peirce' Logical Graphs and the Philosophy of Notation'

This work is part of a larger project concerning the possibility of a typology of logical notations. I illustrate and discuss parameters of notational variance by reference to Charles S. Peirce's logical graphs. Existential graphs are expressively equivalent to (a fragment of) polyadic quantificational logic with identity. I will argue that the notational difference between the graphs and the standard FOL language is explainable by reference to two parameters of notational variance that I will define: "linearity" (vs "non-linearity") and "occurrence-referentiality" (vs "type-referentiality").

14h40
Claude ROSENTAL (CNRS/EHESS/CEMS)
'Producing Demonstrations in Computational Logic: An Empirical Study'

My presentation will be based on an empirical study I conducted several years ago on how a research team developed and implemented a theorem prover. I examined how both proofs and public demonstrations of the prototype were produced over the course of the project. I will present the methods I used and the results I obtained in the course of this study. This will lead me to raise a fundamental issue: to what extent can logic – and computational logic in particular – be regarded as an experimental science and an observational science? I hope to illustrate the value of taking computational logic as a subject of study within the Interlog project.

15h20 - Coffee Break

15h40
Jan VRHOVSKI (STIS University of Edinburgh)
'Towards a "Stronger" Epistemology? Contextualising the Demand for New Epistemological Foundations for Cross-Cultural History of Logic'

In my talk, I aim to revisit the main tenets of the Edinburgh "Strong Programme" (SP) in the sociology of knowledge (David Bloor) and to place them alongside Michael Beaney and Karyn Lai's recent paper on "knowing in historical and cross-cultural context". By setting out the methodological limitations and intellectual tropes embodied in the Edinburgh SP, and more broadly in twentieth-century British history of science, I shall consider how Beaney and Lai's (2025) approach can, or cannot, address earlier theoretical gaps in the ways the history of logic has been shaped by 'external' discourses such as the sociology of knowledge, psychology, and philological and cultural studies. I shall also examine how and why earlier historiographies of logic, driven by scientistic assumptions and forms of internationalism, failed to accommodate an intercultural perspective, and whether half-forgotten programmes such as the Edinburgh SP may still help us rethink the use of epistemological perspectives in cross-cultural intellectual research. In other words, I shall ask why Beaney and Lai's call for a deep epistemology is also necessary for the history of logic, and how its underlying causes should be understood. Fragments from the history of modern logic in China and India will serve as the principal examples.

16h20-17h20
Roundtable with the speakers, Jonathan Chimakonam (University of Pretoria), Noah Friedman-Biglin (San Jose State University), Tarryn Harding (Cape Town University) and J. Brumberg-Chaumont.

Panel 'Natural logic'

org. J. Brumberg-Chaumont and Scott L. Pratt, with the support of the IRP/CNRS project 'Pluralizing Logic'.

Chair : Maarten HOENEN (University of Basel)

9h
Julie BRUMBERG-CHAUMONT (PSL/CNRS/LEM) and
Scott L. PRATT (University of Oregon)
'Introduction : a brief history of the concept of natural logic'/*futuralia*)'

9h30
Gyula KLIMA (Fordham University, NY)
'Formal Semantics, Scholastic Logic, Natural Logic, and Artificial Intelligence'

Formal semantics *à la* Richard Montague is one of the most powerful modern tools for modelling linguistic understanding and the logical relations encoded in that understanding. Yet, what we gain in precision on that approach is offset by its highly technical, artificial, and explicitly partial character, working as it does on a predefined fragment of a natural language, mechanically translated into an intensional logic with its own artificial syntax, and a possible-worlds semantics. In this paper, I will contrast this approach with the approach of scholastic logicians, whose semantic ideas directly applied to a natural language, a technically "regimented", partial, but "open ended" Latin. Next, I will outline how I think the advantages of both of these approaches can be combined in a "natural logic" involving the modelling of concepts encoded in a natural language in terms of the semantic functions of the syntactic elements, on the level of morphemes, of that language. Finally, I will point out how the implementation of the resulting "hybrid approach" in contemporary and future LLMs can contribute to the production of more genuinely "intelligent" AI systems.

10h10 – Coffee Break

10h30
Marc CHEMILLIER (EHESS, CAMS, Paris)
'Natural mathematics'

The term 'natural', used in expressions such as 'natural logic' or 'natural languages', can also give rise to the expression 'natural mathematics'. Its meaning lies in the distinction between these so-called 'natural' mathematics and more formal mathematics. Thus, natural mathematics would correspond to the intuitive aspect of mathematical activity, as opposed to its formalized aspect, expressed through rigorous symbolism. The term 'natural' also suggests that this intuitive activity is independent of cultures and, in a sense, universal. Some decolonial schools of thought adopt an approach to culture that could be described as 'fragmentationist', in that it tends to radically separate the 'West' from the rest of the world. I will address this idea in light of my ethnomathematical fieldwork in Madagascar. My fieldwork experience leads me to believe that there is a notion of 'connivance' beyond cultures, which manifests itself when mathematical ideas are shared between people from very different cultures.

11h10
Izumi SEKIZAWA (Higashi Nippon International University)
'Grammatica ante grammaticam': A Twofold Conceptualisation of Grammar and Logic in the Thirteenth Century'.

Over the past fifty years, developments in linguistics have brought continued attention to the idea of an innate syntactic faculty. It refers to a kind of biologically implemented computational operation in the mind, according to the Chomskyan framework. By contrast, in the traditional view of the Latin-speaking Middle Ages, syntactic features of language were generally treated as objects of scientific inquiry within the domain of grammar, rather than as manifestations of an innate faculty. In the thirteenth century, however, a comparable idea of syntactic innateness emerged on the basis of newly transmitted sources, such as the *Logica* of Avicenna. Drawing on Avicenna, Roger Bacon, for instance, formulated a kind of innate syntactic competence for composing elements to constitute an utterance. Boethius of Dacia posited a naturally inherited locutio or grammatica, characteristic of our species. Yet both thinkers remained committed to establishing the scientific status of grammar and logic as disciplines. This tension gave rise to a twofold conceptualisation of the language sciences: on the one hand, as grounded in an innate, natural capacity; on the other, as constituted as formal, teachable bodies of knowledge.

12h-14h – Lunch Break (buffet), : Faculty Club, Petit Salon

Chair : Anna MARMODORO (Saint Louis University)

14h
Sorana CORNEANU (University of Bucharest)
' "Natural illation": Gassendi and Locke in conversation with the late Scholastics'

In this paper I look at the account of syllogistic reasoning in Pierre Gassendi's *Syntagma Philosophicum* (1658) and John Locke's *Essay concerning Human Understanding* (1690). Both call for of a revised form of syllogism in which disposition should yield clarity; they praise clarity in terms of naturalness, while condemning non-clear structures as artificial; and they interpret clarity as a function of the activity of the natural faculties of the mind. Thus, both ask that the revised syllogism should represent the natural order of the mind's act of attending to its ideas in the process of inference. I suggest that Gassendi's and Locke's views on this issue may be understood as interventions in a late scholastic conversation on the notion of natural inference, which can be traced back to Zabarella.

14h40
Élodie CASSAN (Université de Rouen)
'The *Port-Royal Logic* : a reshaping of the distinction between natural and artificial logic'

In this paper, I consider the definition of logic in terms an « art of thinking » articulated in the Port-Royal Logic, a logic textbook bestseller of the early modern period in Europe. I address Arnauld and Nicole's defense of logic as an « art of thinking » rather than as an art of « reasoning well » in terms of a reshaping of the medieval conceptual distinction between natural logic and artificial logic.

15h20 – coffee break

15h40
Elena FICARA (Paderborn University)
'Hegel on the Naturalness of Logic'

The preface to the second edition of Hegel's Science of Logic is crucial for understanding the idea of Hegel's logic. It is an important text because what Hegel writes is not an idiosyncratic view about logic, but rather something that can genuinely dialogue with more recent, and perhaps more sophisticated, accounts of logic. One central aspect of Hegel's argumentation in the preface is the idea that logic is natural. In this paper, I focus precisely on this aspect, addressing four Hegelian theses about the naturalness of logic.

16h20
Claudia CRISTALLI (Tillburg University)
'Choosing science: logic and psychology in Peirce, 1868-1878'

In the decade from 1868 to 1878, Peirce wrote what would become his best-known work: the papers composing the "cognition" series of 1868 and the *Illustrations of the Logic of Science* series of 1877-1878. These works are usually examined through the lenses of what would come later, namely, Peirce's theory of signs and the pragmatist theory of inquiry. In this talk, I propose a different reading, which emphasizes the 1868-1878 writings as a *product* of Peirce's philosophical and psychological research, rather than as an anticipation of things to come. This allows us to understand Peirce within the context of his time. From Scottish common sense philosophy to Mill's empiricism to Whewell's "idealist" philosophy of science and to post-Kantian Germany, psychology was often used to ground and improve upon existing epistemological theories. Peirce shaped his first epistemological essays with the results of almost twenty years of experience in experimental psychology, managing however to maintain logic and epistemology distinct from psychology proper. I highlight the different roles that logic and psychology have in Peirce's theory of inquiry and emphasize the voluntaristic aspects of choosing to think logically.

17h-18h
Roundtable with Claude Imbert (ENS), Maarten Hoenen (Basel University), Alain de Libera (AIBL, Collège de France)

PANEL 'LOGICAL EDUCATION'
org. Jerry ROSIEK, University of Oregon

Chair : Scott L. PRATT (University of Oregon)

9h30
Jerry ROSIEK (University of Oregon)
'The Logic of Educational Improvement'

Efforts to improve educational practice in the 20th century are increasingly driven by empirical research on learning. This research takes many forms and is framed by many different epistemologies and ideologies. This paper argues, however, that almost all of this research is bounded by classical logic organized around the principle of non-contradiction. We show how a basic form of logical reasoning known as *reductio ad absurdum*, which presumes the inviolability of the principle of non-contradiction, lies at the core of most contemporary empirical research on teaching and learning. We then examine three key methods of social science research, each of which relies on a process of surfacing contradiction: null hypothesis testing, critical theoretic social analysis, and post-structural discourse analysis. This often-unacknowledged reliance on the principle of non-contradiction places limits on the purposes education research can serve, and thereby limits on the content and politics of educational improvement. This paper examines the possibilities opened by designing educational research with dialetheic and paraconsistent logics that permits a greater emphasis on transformative outcomes and is as a consequence better suited to educational research focused on large scale change than a classical logic of representation.

10h10
Elisabeth DE FREITAS
(Adelphi University, New York)
'Algorithms, rules, axioms: Different kinds of generalization in mathematics and logic'

The widespread belief in the oracle-like capacity of algorithmic judgment is in part due to its capacity to simulate what historian of science Lorraine Daston (2022) calls a "thick" rule. Thick rules are responsive to particular cases, generalizing from particular to particular; in contrast, thin rules are "unencumbered by examples and exceptions" and are pared-down and brittle. Mathematics has both thin and thick rules. In the case of current AI models, the opaque thickness is linked to how the error function is constantly broken and rewritten through its own instrumental structure, resulting in a lack of transparency and explainability. The 'rules' of deep learning algorithms run on constant updating, modulating the weights of parameters with each iteration, and interpolating their way incrementally from particular to particular. These are data-driven algorithms, compressing the noise and the aberration of particulars to achieve a general rule. Revealing how algorithmic rules achieve their *unstable* generality, unlike other kinds of mathematical practice, by learning from particular to particular, is a way of exposing their distinct mode of generalization. Of course, algorithmes pre-exist computers by thousands of years. Before the automation of calculation, before the rise of mathematical logic, and before the digital data deluge, mathematical algorithms were part of training processes for particular trades people in ancient Babylon, Egypt, and China, and became core pedagogical tools in the Medieval Middle East. Historical sources of early algorithmic processes are overwhelmingly didactic texts. In this presentation, I discuss the different ways "generalization" of rule is achieved in mathematics, and the role of logic in mathematics education, drawing on historical and philosophical research.

10h50 – Coffee break

11h10
Julie BRUMBERG-CHAUMONT (PSL/CNRS/LEM)
'Logicized methods of teaching and educational virtues of logic during the Middle Ages'

My contribution aims at clarifying the role played in the emergence of a logical education in the context of the 'school revolution' that took place during the Middle Ages, with the birth of universities and Mendicant studia, looking at its social, pedagogical, intellectual and anthropological significance. One can observe a phenomenon of a 'logical education' in three senses : first, quite obviously, in a system of teaching based upon a propaedeutic and advanced teaching of logic during several years, imposed on almost the totality of medievaintellectual elites (sense 1) ; in the implementation 'logicized' practices of teaching and knowledge in many disciplines outside logic (or even outside academia) – including a reflection about the need of a logic specific to each field of knowledge – (sense 2); in the role attributed on logic in the theories of education, with the development of reflections about the anthropological dimension of logic, that is, the ability of the acquisition of the discipline logic to make a Man a Man (sense 3).

11h50-12h30
Roundtable with the speakers and S.L. Pratt (University of Oregon)

12h30 – Lunch Break (Restaurant INED)

Panel 'Psychology of Reasoning and the Question of Cerebralizing Logic'

org. Shira Elqayam ((De Montfort University, Leicester) and Laurent Goffart (CNRS)

Chair : Scott L. PRATT (University of Oregon)

14h
Shira ELQAYAM (De Montfort University, Leicester)
'Four theses on logic in human thinking'

Following Marr, I distinguish between three levels of analysis in psychology and neurology of reasoning: computational (*what* the system computes); algorithmic (*how* it is computed); and implementational (*hardware / wetware* level). I will review four theses on the place of logic in human thinking, from the strongest to the weakest.
1. *[Some] logic is part of human cognition*. According to this view, logic provides adequate computational and algorithmic level descriptions of human thinking. Authors taking this stance vary on various parameters, including whether they also regard logic as an appropriate normative system, and which logic (extensional, default, probabilistic, etc.) they favour as a psychological model.
2. *Dual processing and logical intuitions*. Earlier versions of dual processing theories suggested that people think logically when they have sufficient mental resources (analytic processing), but resort to rules of thumb when not, leading to errors and fallacies (intuitive processing). More recent developments emphasise human ability to reason intuitively seemingly in conformity with classical logic. This line of work is focused on processing, implicitly accepting logic as a normative system.
3. *Psychological universals*. In this view, the main research question is which (if any) elements of logic can be found to be robust across individuals and cultures. Logic per se is neither appropriately normative nor descriptively adequate, but some elements underly human cognition; for example, deontic thinking. This view sees common ancestry between human cognition on the one hand, and logic as a computational and algorithmic system on the other hand.
4. *Simple heuristics*. This view rejects logic entirely as neither appropriately normative nor adequately descriptive.

14h40
Marian COUNIHAN (University of Groningen)
'Logic in and around reasoning'

In this talk I will discuss research I conducted during my PhD looking at how we situate logic in relation to reasoning and truth, predominantly through empirical research paradigms. I will review relevant findings about the role and status of logic in language-based reasoning tasks and sketch some ways the relation between logic and reasoning can be recast in light of recent pragmatic accounts of truth.

15h20 – Coffee break

15h40
Laurent GOFFART (Centre Gilles Gaston Granger, UMR 7304 CNRS Aix Marseille Université, Aix-en-Provence, France)
'On the quest for neural bases of Logic: a neurophysiological and epistemological perspective'

'On the quest for neural bases of Logic: a neurophysiological and epistemological perspective'
Modern neurobiology accumulates a vast body of knowledge about brain functioning, while the psychology of reasoning focuses on describing the rules governing how humans produce and evaluate logical statements. Few studies explicitly address the gap between these two fields, with some attempting to ground logic in neurobiological mechanisms. But do elements exist that could bridge the gap between, on one hand, the observations and experimental findings reported by neurobiology, and on the other, the system of structuring and verification rules that guide the production of unambiguous statements? Does such a question not suffer from a mereological fallacy – confusing the level of description of brain function with the normative level that defines humanly intelligible communication? To imagine that logic could be implemented through activities propagating across neural networks is no more plausible than assuming that gravity is embodied in the apple falling from the tree. After a pedagogical overview of fundamental neurobiological concepts (neurons, synapses, excitation, inhibition, action potentials, and neural networks), we will examine the limitations of lesion studies, which often associate a deficit in reasoning with dysfunction in a specific area of the cerebral cortex. Such associations overlook

the facts that the brain is a dynamic system and that a lesion is not restricted to its anatomical location, but disrupts a multitude of channels, engaging a far larger neuronal mass than a single neuronal «junction». We shall also discuss the epistemological errors arising from the confusion between, on the one hand, the emission of interneuronal communication signals – the sequences of action potentials – and on the other, local variations in blood flow and changes in deoxyhemoglobin and oxyhemoglobin levels. Functional brain imaging cannot contribute to understanding cognitive mechanisms unless it stops conflating correlation with causation. Finally, we will argue that it is possible to construct a coherent discourse describing what the brain functioning enables us to do, without drawing on this vast body of knowledge to do what we do or even improve our performance.
mative nor adequately descriptive.

16h20
Olivier KELLER
'The Limits of the "Cerebralization" of Logical and Mathematica Thought'

The relationship between thought and the brain remains a difficult and unresolved problem. It is often assumed that thought – especially logical and mathematical thought – is a property of the brain, and that intellectual progress, whether at the individual level (learning) or the collective level (history), results from biological changes in the brain itself or in its functioning. More ambitiously, some neuroscientists claim to discern within the brain a direct link between neuronal activity and thought processes, rendering the latter amenable to direct experimental investigation, notably through brain imaging. However, closer scrutiny of experimental practices, as well as the marked divergence in interpretations among neuroscientists, gives rise to doubt. In the domains of logic and mathematics, we argue that researchers tend to read into their findings what they expect to find, and at times misconstrue the nature of the concepts at stake. Moreover, when pedagogical applications are proposed, they tend, at best, to complicate rather than facilitate the transmission of knowledge. Finally, we suggest that "cerebralist" theories, when confronted with the actual course of historical development, appear implausible.

Thursday 4th of June
Auditorium 250

17h
Wim DE NEYS (CNRS) & **LaPsyDE** (Université Paris Cité)
'The Seat of Reason? Exploring the Neural Basis of Sound Logical Intuiting'

Dual-process theories typically propose that correct logical reasoning depends on deliberate processing to override misleading intuitive responses. However, recent behavioral work suggests that sound reasoners can often reach correct conclusions intuitively. I'll present an fMRI study that examined the neural basis of sound intuitive versus deliberate reasoning using a modified two-response paradigm with bat-and-ball-type problems. Participants, pre-screened as correct or biased reasoners, completed reasoning trials under time-restricted (Fast) and unconstrained (Slow) conditions. A brief explanation-based debiasing intervention was introduced between scanning sessions. In correct reasoners, prefrontal regions – including medial, superior, and inferior frontal gyri – were activated during both Fast and Slow trials, suggesting that these regions may support intuitive as well as deliberative processing. In biased reasoners, post-intervention improvements were associated with increased activation in posterior cingulate and medial-inferior prefrontal areas. Findings challenge the assumption that prefrontal activation reflects deliberation alone, and suggest a possible shared neural basis for intuitive and deliberate reasoning.

17h40-18h40
Roundtable with the speakers, Catarina Dutilh-Novaes (VU Amsterdam), and Marc Chemillier (EHESS, CAMS, Paris).

Panel 'Logic and Law'

org. C. Leveleux-Texeira

Chair : Claudia MOATTI (University Paris VIII, Univ. of Southern California)

9h30
Corinne LEVELEUX-TEXEIRA (PSL/EPHE/LEM)
'Introduction'

10h
Irène ROSIER-CATACH (CNRS, EPHE, Paris)
'Meaning of Speech and Intentions of Speakers. Interactions between Semantics, Law and Theology'

We will examine the relationship between law and medieval theology through the question of the meaning of words and the speaker's intent. Two traditions are in conflict: one, beginning with Gratian and drawing on Augustine, prioritizes divine judgment, which takes the speaker's intention into account; the other, rooted in Roman law, emphasizes conventional meaning and the listener's reception. This tension, which emerges in the chapters *De verborum significatione* of canon law, is revealed in specific cases such as lying, perjury, marriage formulas, and more generally sacramental formulas, where it is not only meaning that is at stake, but also efficacy and validity. Jurists and theologians attempt to resolve conflicts between conventional meaning, the speaker's intention, and the listener's understanding, particularly in cases of deception or ambiguity. The article thus highlights a tension between a vertical logic (relationship with God) and a horizontal logic (relationships between individuals).

10h40 – Coffee break

11h
David DE CONCILIO (University of Padova)
'Between arguments and legal rules. *Brocardica* in the *ius commune* tradition'

In the wake of the twelfth-century "legal renaissance", jurists in the schools of Roman and canon law developed several tools aimed at better understanding and employing the legal sources, both in courts and teaching. One of the first tools of this kind were brocards (*brocardica*): a form of argumentation based on topical techniques and often used to argue both in support and against a certain legal principle. The exact nature, scope, and purpose of brocards have long been debated by scholars. This paper aims to provide a brief but comprehensive account of their roots and historical transformation, focusing on collections of brocards produced between the second half of the twelfth century and the end of the thirteenth. In doing so, *brocardica* will be interpreted in light of the rhetorical and dialectical techniques used in the contemporary schools of liberal arts, suggesting that their emergence can be explained by the jurists' interest in topical argumentation, in the form of *maximae propositiones*, *differentiae*, and *circumstantiae*. It will also be shown that brocards were initially developed to help practitioners in arguing cases, while later they successfully employed for hermeneutics and teaching, thus progressively shifting their structure and function.

12h – Lunch Break (Restaurant INED)

Chair : Corinne LEVELEUX-TEXEIRA

14h
Raphaël ECKERT (Strasbourg University)
'Logic and Law in the Middle Ages: a historiographical overview'

For a long time, legal historians showed little interest in the links between medieval legal science and other fields of knowledge. It must be said that medieval jurists themselves tended to present their knowledge as self-sufficient and independent of any other discipline. Yet there were numerous interactions and influences between different sciences, not only between law and theology but also between law and logic. This is what the publications – admittedly few in number – that have addressed this question, particularly in Italy and Germany, tend to demonstrate: jurists not only familiarized themselves with the logical corpus and its commentaries (especially the Aristotelian *Logica vetus* and *nova*) but also drew upon logic to develop legal reasoning (*distinctio*, syllogism) between the 12th and 13th centuries. This paper aims to present the main contributions of this relatively recent historiography and to trace its developments.

14h40
David KREMER (University Paris Cité)
'Are Legal Classifications Logical? The Example of the Sources of Obligations in Roman Law'

This presentation examines the classification of obligations in Roman law as an operation of ordering legal categories. Drawing on the classifications developed by Gaius in the second century CE and later by Emperor Justinian in the sixth century, it seeks to demonstrate that the division of obligations into contract, delict, quasi-contract, and quasi-delict does not merely constitute a descriptive arrangement, but rather reflects a genuine conceptual effort to articulate similarities and differences among the sources of obligations. The analysis will focus in particular on the "*quasi ex*" fiction, which allows certain situations to be treated juridically as akin to contract or delict, even though they do not share their structural features. It will be argued that legal classification in Roman law emerges as a distinctive logical practice, one that departs from the constraints of strict definition and operates at the intersection of doctrinal systematization, interpretation, and the production of legal forms.

15h20 – Coffee Break

15h40
Shingo AKIMOTO (CNRS, Institut d'Histoire du Droit Jean Gaudemet - UMR 7184)
'Legal Systematization and Logic in the Renaissance'

This presentation seeks to shed light on the use of logic within the movement of legal systematization promoted by certain legal humanists in Renaissance France. It focuses on the revival of the Ciceronian idea of systematization (*de iure in artem redigendo*), particularly through the application of logical methods to the law, especially *diairesis* (division). This approach led jurists to engage in philosophical reflections on human nature and to question the authoritative notion of natural law as shared by all living beings – a notion transmitted by the Digest of Justinian. They thus put forward a vision of legal order that differed from that of medieval jurists, one that was more systematic and more accessible to students and legal practitioners.

16h20
Roundtable with the speakers, Julie Brumberg-Chaumont, Claudia Moatti, Christophe Grellard (EPHE).

17h20
General roundtable
Discussion of the future edited volume
Preparation of Interlog FORUM2 (July 2028).

18h – Farewell Cocktail