

Proposal form

Scientific Information

Main applicant	Engel, Pascal
Project title	Knowledge, Evidence and Practice

1. Summary of the research plan

Knowledge, on the traditional picture, enjoys no principled relationship to action although there are indeed parallels. Knowledge and action are the main relations between our minds and the world. In action to use the familiar metaphor, the direction of fit or of adaptation is from world to mind. Beliefs aim at knowledge, desires aim at action. In knowledge mind is directed and adapted to the world. When our beliefs are taken to be false, we are led to reject them or to revise them. When our desires fail to be satisfied, we feel no such pressure to change them. Knowing is one thing, which belongs to the theoretical realm and obeys its laws, and acting is another thing, which obeys the requirements of the practical realm, which are, at least *prima facie*, independent. Knowing is understood classically as a relation to propositions, which are, when known, true. There is a strong division between theoretical knowledge on the one hand – knowing *that* – and practical knowledge – knowing *how* – on the other. The justification of our beliefs is a matter of their being based upon evidence and seems to have nothing to do with the outcomes of our actions. Theoretical reasoning, which moves from beliefs to beliefs, is distinct from practical reasoning, which goes from beliefs, desires to intentions and to actions. Indeed theoretical rationality and practical rationality are as distinct as chalk and cheese. This is reflected in the structure of classical decision theory: on the one hand there are degrees of belief as subjective probabilities, on the other hand there are degrees of utility and desirabilities. In Moreover the logic of decision obeys principles which are distinct from those of the logic of belief revision. The fundamental separation between theoretical and practical reason is also reflected at the level of the fundamental structure of reasons and values. Theoretical reasons are one thing, practical reasons another. The structure of justification is not the same and each domain is separate from the other. Cognitive and practical values fall apart.

This traditional picture, however, has become more and more under strain in almost all of its aspects, and the relationships between knowledge and action have become more and more prominent in recent theory of knowledge, formal epistemology and philosophy of mind. We intend to focus upon the three following strands (which by no means exhaust the possible issues related to knowledge and action).

Strand 1: Theoretical knowledge vs. practical knowledge

A number of philosophers, following Ryle and many others, have attacked the “intellectualist legend” according to which there is a strong division between theoretical and practical knowledge, knowing that and knowing how. They have criticised the classical view that practical knowledge is based on propositional and judgmental knowledge, and they have emphasised the dispositional and practical basis of all knowledge. Although these distinctions seem to be well entrenched, to what extent are they justified? A number of recent writers (in particular Stanley and Williamson 2001) have contested these divisions, and held that knowing how is a form of knowing that. What is the value of their arguments?

Strand 2: Evidence and practice

In normative epistemology evidentialism, the view that the only justification that one can have for a belief is evidence, has been under pressure in particular from two sources. On the one hand, from an externalist standpoint, reliabilists hold that evidence cannot be the only kind of justification for beliefs and that their causal etiology plays a central role. This has led epistemologists to give weight to factors external to the mind in particular their causal and cognitive dispositions, and, on some views, to their practical environment in general, including social determinants. On the other hand, from a more internalist stance, deontologists have defended the view that justification is a matter of obeying certain epistemic obligations and requirements. This has led to a renewed interest in the classical theme of an ethics of belief, and in the idea that believing, judging, and – in so far as knowing entails believing – might involve voluntary or at least active commitments on the part of agents, and not simply passive reception of information. On some versions of reliabilism which emphasise the role of cognitive virtues and skills in the acquisition and the validation of knowledge (Sosa 2007, Greco 2009), the very idea of epistemic agency gets a strong currency. On some versions of “virtue epistemology” not only knowers have to be agents, but they have to be moral agents, responsible for their epistemic acts. In order to understand the impact of these developments we need to understand the claim of evidentialism in epistemology and its credentials.

Strand 3: Pragmatic encroachment on knowledge and justification

The problem of the relationship between knowledge and action has recently taken a new contextualist turn within contemporary epistemological discussion about the analysis of knowledge (DeRose 2009, Stanley 2005, Fantl & Mc Grath 2002). A number of philosophers have emphasized the strong connexions that exist between our ordinary ascriptions of knowledge on the one hand and practical reasoning on the other. They hold that in a number of contexts, what is practically at stake affects our judgments about whether subjects in these situations know the relevant facts. This kind of “pragmatic encroachment” is supposed to threaten the traditional “intellectualist” conception according to which only attending to evidence can justify claims to knowledge. It is apparently reinforced by the observation that in a number of cases, what one knows or fails to know (in contrast with what one simply believes) affects the success of our actions (Williamson 2000, Hawthorne 2006, Hawthorne and Stanley 2009). The constitutive role of knowledge within practical reasoning reinforces the claim that there are strong structural ties between knowledge and action.

2. Research plan

2.1. CURRENT STATE OF RESEARCH IN THE FIELD

Classical epistemology rests upon three main theses about the nature of knowledge. One is that knowledge can be defined as a form of justified true belief. The second is that justification has to be based on the nature of evidence which is possessed by a believer. The third is that there is a sharp division between theoretical and practical knowledge, the former being propositional (*knowing that*), and the latter being non propositional (*knowing how*), and that there is a privilege of theoretical knowledge over practical knowledge. These three claims have been contested in contemporary epistemology.

1. The analysis of knowledge as justified true belief (JTB) has been contested by the celebrated Gettier counterexamples (Gettier 1963). After several decades of “Gettierology” a number of epistemologists have come to the conclusion that the concept of knowledge may well be unanalysable. Williamson (2000) and others (Sutton 2007, Engel 2007, Dutant 2010). Instead of trying to spell out necessary and sufficient conditions for knowledge, these philosophers have suggested that one attends to the role that knowledge plays within our ordinary attributions and in our reasoning in general. They have emphasised the fact that knowledge plays a crucial role – and a more important one than belief – in the explanation of action (Williamson 2000), in practical reasoning (Williamson 2000, Hawthorne 2004, Hawthorne and Stanley 2008) and with respect to action in general.

2. Evidentialism, as a thesis about the nature of justification, has been contested from at least three angles. In the first place reliabilist theories of knowledge, which locate the justification of belief in the causal etiology of our beliefs and bases justification on reliable processes. As Goldman (*to appear*) notices, the idea that a belief should be justified on the basis of the available evidence stands in frontal opposition to the idea that what matters is the causal ancestry of the belief, not only because reliabilist views insist that the subject needs not have access to the causes of their beliefs whereas most internalist conceptions do insist on accessibility, but also because causal process and evidential relations seem to be justifiers of a completely different nature.

Virtue epistemology, in any of its versions (Sosa 2007, Greco 2007, Zagzebski 1995, Baehar 2009), stands in opposition with classical evidentialism. Like reliabilism it locates justification within the causal etiology of beliefs, but construes this etiology as bases upon acquired dispositions, skills and virtues. In all versions the dispositions and virtues are agent relative. Greco (2007) calls his own version “agent reliabilism”, although only the versions which insist on the responsibility and the motivations of the agent to acquire the relevant epistemic skills and virtues emphasise the strong analogies between the epistemic and the moral case, and renew the traditional Aristotelian themes of the fabric of character.

Evidentialism has also been threatened from another standpoint. A number of philosophers, often inspired by Wittgenstein’s approach to certainty and scepticism, but also by

the Reidian tradition of common sense philosophy, have insisted upon the groundless nature of basic beliefs (in particular in perception and testimony, but also for self-knowledge) and upon the fact that a distinct kind of justification (or possibly not a justification at all), which they call entitlement, is more appropriate to characterise our confidence in these beliefs (Burge 1992, Peacocke 2004). These views too stand in opposition to the evidentialist thesis. In his recent discussions of scepticism, Crispin Wright (2004) has also proposed a kind of entitlement based on pragmatic strategies and epistemic projects (inspired in part by Reichenbach's pragmatic vindication of induction, see Engel 2009a). Such kinds of entitlement relations would deepen the links between the knowledge claims and claims about reasons for action.

Last but not least, pragmatism, in many of its varieties (but not in the classical Peircean version) has been opposed to classical evidentialist epistemology, in insisting upon the role of inquiry within the enterprise of knowledge. Pragmatism is, broadly speaking, the view that cognition has its roots in action, that our theoretical appraisals are strongly associated with the practical outcomes of our actions. In its strongest form, pragmatism is the view that theoretical and cognitive reasons and justification are indeed *reducible* to practical ones. So in a broad sense the recent developments mentioned above seem to be grist for the pragmatist mill. Contemporary pragmatists are indeed apt to take advantage of all these developments to defend a view of justification and of inquiry which emphasises just these aspects (e.g. Hookway 2000, Brandom 2008).

3. The third thesis, the idea that the paradigm of knowledge is theoretical and propositional knowledge, and that there is a sharp division between these two kinds of knowledge, has been subject to much criticism in contemporary philosophy ever since Wittgenstein and Ryle (1949) have emphasised the importance of knowing how and its difference with knowing that (but this has of course deeper roots in traditional philosophy as well as in early versions of pragmatism) and attacked the "intellectualist legend" according to which knowing how is based on knowing that. Knowing how is not, in general, based upon evidence, does not call for a kind of justification, and is ordinarily claimed to be non propositional and non conceptual in nature, tacit or implicit rather than conscious and explicit. It is widely thought to constitute a distinctive kind of knowledge which is practical rather than theoretical. A large portion of contemporary philosophy has actually advanced the idea that practical knowledge is not only as important, but perhaps at the basis of all knowledge. Pragmatism and a number of views in the sociology of knowledge, have taken up these themes. Not all versions of the distinction agree that knowing how is based on practical abilities. The distinctive neo-rationalist Chomskyan tradition takes it to be mostly cognitive, and the theme of course features widely within contemporary research in cognitive science and in the philosophy of mind. But some philosophers have recently been willing to go into the other direction, by claiming that actually knowing how is a species on knowing that, and based upon it (Stanley and Williamson 2001, Stanley to appear). These developments call for a re-examination of the very dis-

inction between knowing how and knowing that, and between theoretical and practical knowledge.

These issues loom large in contemporary epistemology and have wide implications, which we obviously cannot take up within a single project (part of them has already been investigated within the project *Knowledge, Reasons and Norms*). The present approach means to be distinctive in focusing on a more limited series of aims, which we consider as interrelated. We shall group them under three headings:

- A. First, on the hypothesis that the relations between knowledge and action are significant, what exactly do they show about the traditional concept of knowledge? This calls for a re-examination of the concept of evidence, of the scope of the evidentialist thesis, which is often understood as implying a strong division between the theoretical and the practical and as presupposing a form of intellectualism. In particular, are recent versions of evidentialism (Conee & Feldman 2005, Dougherty 2010) threatened by such phenomena as pragmatic encroachment or the role of knowledge in practical reasoning? What is to count as evidence for a belief, and what is the role of evidence in justification?
- B. Second, what exactly are the relationships between knowledge and action? To what extent do the ties between knowledge and action call for a revision of our ordinary notions of justification, knowledge, or reasoning, evidence and possibly of truth? What is the scope of “pragmatic encroachment” or pragmatic import on epistemic notions? Is it as strong as that which is claimed both by pragmatists and by those who, like Jason Stanley (2005), aim to relate systematically knowledge and “practical interests” and accuse evidentialism of undue “intellectualism”?
- C. Third, to what extent is the classical division between theoretical or propositional knowledge threatened? How should we reconstruct this distinction? What are exactly the scope and the value of Ryle and others’ criticism of the intellectualist legend? Should it lead us to a renewed form of pragmatism about knowing how, or, on the contrary, to a renewed form of intellectualism and of evidentialism?

2.2. CURRENT STATE OF YOUR OWN RESEARCH

The research group *Episteme* in the University of Geneva will be the host of this research. (<http://www.unige.ch/lettres/philo/episteme/>). The present project, which is meant to further, although along distinctive and novel lines (it is a *new project*), a previous FNS project *Knowledge, Reasons and Norms / Connaissance, raisons et normes* (FNS 100011-116032 2007-2010), aims at examining only a subpart of the large territory of the relationship between knowledge and action¹. It is meant also to have important connexions with the FNS project *Perception, autorisation épistémique et connaissance a priori/ Perceptual War-*

¹To name a few topics which we shall *not* deal with, although they are, in many ways, relevant to the issues raised here, but which we hope to take up further in other work:

rant, Entitlement and A Priori Knowledge (FNS FNS 100011_124613, 2009-2012). This research will be led in close association with the *European Epistemology Network*, which links various departments in Europe working in epistemology (Lund, Edinburgh, Amsterdam, Leuven, Geneva) (<http://epistemologynetwork.com/>).

The project *Knowledge, Reason and Norms* dealt with issues in epistemology which are related to those of the present project: the nature of reasons to believe, the duality of practical and theoretical reasons, the ethics of belief and contextualism about knowledge ascriptions. The project *Perceptual Warrant, Entitlement and A Priori Knowledge*, which will end in 2012, deals more specifically with issues about perceptual entitlement and has obvious connexions with the present one. But the work done within these projects led us to attempt to expand them in new directions, by focusing more directly on the relationships between knowledge and practice.

Pascal Engel, main applicant, is ordinary professor of contemporary philosophy at the University of Geneva, director of the department of philosophy and of the research group *Episteme*. He is also director of the FNS project "*Perceptual Warrant, Entitlement and A Priori Knowledge*" and of the FNS pro-doc subprogram "*Epistemic, Rational and Social Norms*".

a) *Mental actions* Recent work in the philosophy of mind and action has revived the traditional dispute in philosophy, whether the mind is passive or active in cognition. The Cartesian tradition held that judging is a matter of the will, whereas the Humean tradition emphasised its causal influences. Contemporary philosophers have been more sympathetic to the idea of mental actions. This has led them to revise the bad reputation which used to be attached, both in the Humean and functionalist tradition and the Wittgensteinian legacy, to the idea that intentions, judgments could be mental acts (Peacocke 2007, O'Brien and Soteriou 2009). These developments call for similar revisions in the theory of judgment and in epistemology, and to the exploration of structural analogies between the problem of freedom of action and the problem of freedom of belief (Pettit & Smith 1996, Ryan 2006).

b) *Theoretical and practical reasoning*. A reflection on the Aristotelian problem of the nature of the practical syllogism and on the connexions between practical and theoretical reasoning has already taken place in the field of the philosophy of action, from the classical works of, among others, Anscombe, Davidson and Von Wright in the 1960. A number of philosophers have been led to draw parallels between the revision of beliefs and the revision of intentions (Harman 1986). Similar developments occurred also in the field of formal theories of rationality, which have tempted, in particular under the influence of a number of work in decision theory, to operate a less sharp division between the theoretical and the practical realms. If rational decision is the product both of degrees of beliefs constrained by requirements of coherence and of practical utilities and values, it is no surprise that what is practical and theoretical elements get entangled. Reaching theoretical conclusions may involve taking epistemic decisions, and the adoption of hypotheses may involve taking practical steps, such as trying to economise the cost of gathering information. A whole field of inquiry, "cognitive decision theory" (Levi 1988, Percival 2006), based upon "epistemic consequentialism", has been based on the idea. Such trade-offs between the practical and the theoretical determinants are reflected in formal structures of the theory of rationality, and have led some theorists (e.g. Rott 2003) to hold the view that practical and theoretical reason do not form separate spheres, but share a common structure, both at the level of formal theories of rationality and at the fundamental level of a general conception of reason, justifying retrospectively Kant's somewhat mysterious dictum that "it is the same faculty of reason which operates both in the theoretical and in the practical domain".

He is the author of 11 books and of more than 200 articles in philosophy of language, philosophy of mind, philosophy of logic and theory of knowledge. His present research and publications are focused on issues in epistemology, in particular on the nature of belief, on scepticism and on the relationships between theoretical and practical reasons. His publications since 1998, in particular his book 2007 and his recent articles (2009 and to appear) are relevant to the present project. He will particularly lead the researches in subproject B on pragmatic encroachment.

His recent publications in this domain include (for other relevant work see: <http://www.unige.ch/lettres/philo/enseignants/pe/>)

Books

Va savoir ! De la connaissance en général, Hermann, Paris, 2007.

What's the use of truth?, Columbia University Press, New York, 2007.

With Julien Dutant, ed. *Philosophie de la connaissance, textes clés*, Paris, Vrin 2005, 445 p.

Some contributions to Collective Books

"Truth and the aim of Belief", in D. Gillies ed *Laws and Models in science*, King's College, London, 2005, pp. 77-97, trad. espagnole in D. Perez Chico & M. Barroso Sanchez, eds. *La pluralidad de la filosofia analytica*, Madrid: Plaza y Valdes Editors 2008: 289-319

"Taking seriously knowledge as a mental state", ed. C. Penco, M. Beaney & M. Vignolo, *Explaining the Mental*, Cambridge Scholar Publishing, 2007, 50-72.

"Vérité, croyance et justification : propos d'un béotien dogmatique", in A. Wald Lasowski, ed.

Pensées pour le siècle, Fayard, Paris, 2008, 212-134

"Pragmatic encroachment and Epistemic Value", in A. Haddock, A. Millar & D. Pritchard, *Epistemic Value*, Oxford: Oxford University Press 2009

"The norms of thought, Sketch of a genealogy", in Tuzet & Canele, eds *The rules of inference*, 2009 tr eng. de « les normes de la pensée ».

Journal Articles

"Belief as a disposition to act: variations of a pragmatist theme", *Cognitio*, 3, Sao Paulo, 2005.

« Logic, Reasoning and the Logical Constants », *Croatian Journal of Philosophy*, vol. VI, 17, 2006, 219-235 (R).

« In what sense is knowledge the norm of assertion? », *Grazer Philosophische Studien*, 77, 2008, 99-113 (C).

"Belief and Normativity", *Disputatio*, special issue on *Normativity*, Lisboa, 2008, 153-177 (C).

« Les normes de la pensée », *Revue de philosophie et de théologie*, 140 (2008), P. 29-47.

" Epistemic Responsibility without Epistemic Agency", *Philosophical Explorations*, Vol. 12, No. 2, June 2009, 205-219.

Santiago Echeverri is currently finishing his PhD thesis in philosophy and cognitive science at the Institut Jean Nicod in Paris, under the supervision of Jérôme Dokic, and will defend it in 2010. His dissertation "The Situated Mind: An Essay in the Theory of Reference" presents and defends the full-blooded program in the theory of semantic competence, which attempts to explain (1) the determination of reference, and (2) the differences in cognitive value of co-referential expressions. He claims that existing theories of reference (descriptivism and referentialism) are unsatisfactory from a cognitive point of view. He also suggests that, in order to develop the full-blooded program, it is necessary to formulate a new theory of meaning and mind, based on the notion of *practical knowledge*. The results so

far are mainly negative: he has argued that descriptivist and referentialist accounts of reference either lead to paradoxes, or are explanatorily empty. In the next few years, he intends to explore the notion of practical knowledge, by clarifying its conceptual, normative, and metaphysical aspects. The aim is to apply these results to the case of linguistic competence, and to provide an alternative to descriptivism and referentialism.

During his PhD studies, Santiago Echeverri has also worked on the philosophy of mind, the philosophy of language and the epistemology of perception. He has co-taught, with Jérôme Dokic, a research seminar on the philosophy of perception at the École des Hautes Études en Sciences Sociales (EHESS), and has written three papers in which he argues for a doxastic analysis of the epistemic role of perceptual experience. He has co-organized the *Doctoral and Post-doctoral Seminar of the Institut Jean Nicod* (2008-2009).

Selected publications

- Echeverri, S. (Submitted) The Myth of the Conceptual Given, submitted to *Philosophical Review* (USA), pp. 35.
- Echeverri, S. (2011) McDowell's Conceptualist Therapy for Skepticism, *European Journal of Philosophy* (UK), 19 (1): 1-30 (Published online on September 25th 2009).
- Echeverri, S. (2010) Epistemic Responsibility and Perceptual Experience, in: G. W. Bertram, R. Celikates, C. Laudou & D. Lauer, eds., *Expérience et réflexivité: perspectives au-delà de l'empirisme et de l'idéalisme* (Collection « Ouverture philosophique »), Éditions L'Harmattan, Paris: 14 pp.
- Echeverri, S. (2008) *La existencia del mundo exterior: un estudio sobre la refutación kantiana del idealismo*, Editorial Universidad de Antioquia, Medellín, 330 pp.

Until September 2010, **Arturs Logins** (1983) will be *assistant de philosophie* for the chair of modern and contemporary philosophy at the University of Geneva. He is presently writing his thesis on Evidentialism under the supervision of Pascal Engel. His primary interest concerns the elucidation of what evidence is and what kind of role it plays in epistemology, both with regards to theories of justification and to theories of knowledge. More precisely, his research concerns not only a mere typology, classification and elucidation of what evidence is, but also an elaboration and defence of a "hybrid" evidentialism. This view is intended to reconcile a series of intuitive arguments from traditional evidentialists (as Conee and Feldman 2004) with a recently developed version of externalist evidentialism (Williamson 2000, Sutton 2005, Hyman 2006), which claims that what evidence is is determined by what knowledge is.

Arturs Logins has studied epistemology at the MA level at the University of Paris IV Sorbonne and graduated with honours (*mention très bien*) in 2009. He has participated in several international conferences. He is editor of the French journal *Revue étudiante de philosophie analytique* and a member of the editorial committee of *Dialectica*. He has also been *chargé de cours* (part time lecturer) of Latvian language studies, in INALCO (Institut National des Langues et Civilisations Orientales), Paris, for 2008-2009. His research within the project will be focused in particular on project A, but also on related issues in project B.

Julien Dutant studied philosophy at the university of Paris IV, in Oxford and at the Institut Nicod. He has been *assistant de philosophie* for the chair of modern and contemporary philosophy since 2007 and is presently studying in Oxford on a grant from the FNS, before coming back to Geneva as assistant. He has participated in the projects *Knowledge, Reasons and Norms* and *Perceptual Warrant, Entitlement and A Priori Knowledge*, and has organised several conferences and workshops. His thesis on *modal theories of knowledge* will be sustained in Geneva in June 2010. He is the editor (with P. Engel) of *Philosophie de la connaissance* (vrin 2005), the author of *Qu'est ce que la connaissance* (Vrin 2010) and of a number of articles and conferences presentations on normative epistemology and formal epistemology.

Selected publications

- « The Case for Infallibilism », in C. Penco, M. Vignolo, V. Ottonelli & C. Amoretti (eds.), *Proceedings of the 4th Latin Meeting in Analytic Philosophy (LMAP/07)*, Department of Philosophy, University of Genoa, Genoa, 2007, pp. 59-84.
- « Inexact Knowledge, Margin-for-Error and Positive Introspection », in Dov Samet (ed.), *Proceedings of the 11th Conference on Theoretical Aspects of Rationality and Knowledge (TARK XI)*, Presses Universitaires de Louvain, Louvain-la-Neuve, 2007, pp.118-124.
- Dutant, J. et Engel, P., eds. (2005) *Philosophie de la connaissance*, Paris: Vrin. (Collection of papers in epistemology: Moore, Gettier, Chisholm, Lehrer, Sosa, Nozick, Goldman, Lewis, Williamson, ...).

Anne Meylan wrote a Ph.D “The Metaethics of Belief” in philosophy under the supervision of Pascal Engel in the framework of the recently completed FNS project: « Connaissance, raisons et normes ». The goal of her work is to formulate the various conditions a believer has to satisfy in order to qualify as praiseworthy for her belief acquisition. In this context, Anne Meylan has been led to consider in detail the notion of evidence and its role in the justification of beliefs, topics which precisely constitute the subpart A of the present project. Moreover, her more general philosophical interest concerns precisely the very nature of the connection between the theoretical and the practical field in epistemology. She is particularly familiar with the literature dealing with the various forms of justification of beliefs —practical, epistemic, instrumental justification of beliefs— and their connections. During the last two years, Anne Meylan took an active part in the international research in epistemology — she recently spent two months as an invited postdoctoral research fellow at the University of Copenhagen. She has been hired by Pascal Engel in the “Warrant, Entitlement and A priori Knowledge” SNF project and is presently working as a postdoctoral research fellow in this project.

Publications

- Meylan, A. 2008. « Le contrôle des croyances. Une défense de la conception déontologique de la justification », *Klesis. Revue philosophique*, vol. 9.
- Meylan, A. 2007. « Why knowledge is better than a mere true belief ? Against a reliabilist explanation », *Proceedings of the Latin Meeting for Analytic Philosophy*, 20-22 septembre 2007, Gênes.

Meylan, A. 2006. « Réductionnisme et anti-réductionnisme à propos de la justification des croyances testimoniales: un faux débat? », Préactes du colloque international de la société de philosophie analytique, Aix-en-Provence, 1er-3 septembre 2006.

Ariel Cecchi studied philosophy in Madrid and at the University of Geneva. He is presently working as a Candoc in the FNS Project *Perceptual Warrant, Entitlement and A Priori Knowledge* and his thesis on *The Normativity of Perception* is supervised by Pascal Engel. He is currently examining different notions of entitlement in order to analyse the differences and the problems in this philosophical concept. He has participated in several conferences and organised a conference on the epistemology of perception (2009) and a conference on the a priori (2010).

Davide Fassio studied philosophy in Torino and Padova. He is currently writing a Ph.D, entitled "Knowledge, Belief and Correctness", under the supervision of Pascal Engel at the University of Geneva. The Primary goal of his work is to provide an analysis of the standard of correctness of belief, according to which a belief is correct if and only if the believed proposition is true. The secondary goal is to clarify the concepts of belief, justification and knowledge in the light of the results obtained by the analysis of the aforementioned standard, and the analysis of "doxastic oughts". His main interests are epistemic normativity, deontic and epistemic logics. He is a member of the FNS research project Pro*Doc "Mind, Normativity, Self and Properties" and has been co-organizer of many events in Geneva organized by the Episteme Group during years 2008-2009.

Publications

"Logically Unknowable Propositions: a criticism to Tennant's three-partition of Anti-Cartesian propositions" (with M. Carrara), In P. Hanna (ed.) *An Anthology of Philosophical Studies*. Vol. 2. Atiner 2009: 181-194.

"Perfect Science and the Knowability Paradox" (with M. Carrara). In *SILFS Proceedings 2007*, 8-10 Octobre 2007, Milano, Forthcoming.

"Belief Correctness and Normativity". In *Logique et Analyse*, Forthcoming September 2010.

2.3. DETAILED RESEARCH PLAN

We plan to divide our research in three sub-projects:

A. Knowledge, Evidence and Justification (Arturs Logins, Ariel Cecchi, Davide Fassio, Julien Dutant, Anne Meylan)

B. Knowledge and Pragmatic Encroachment (Pascal Engel, Arturs Logins, Julien Dutant, Davide Fassio)

C. Theoretical and Practical Knowledge (Santiago Echeverri, Ariel Cecchi, Pascal Engel, Anne Meylan)

SUBPROJECT A. Knowledge, Evidence and Justification

Main researcher: Arturs Logins (Candoc)

Associate researchers: Ariel Cecchi, David Fassio, Julien Dutant, Anne Meylan

A.1. Introduction

According to classical enlightenment epistemology (Locke, Hume) a belief is justified if and only if it is based upon evidence. *Evidentialism* is the view that the only source of justification is evidence. According to the classical definition of knowledge (Plato, Gettier), a belief amounts to knowledge if and only if it is true and justified. Combined with evidentialism, this classical definition yields the view that knowledge is justified true belief based upon evidence. There are, however, strong disagreements among epistemologists on each of these points: not everyone agrees that evidence is the only source of justification, about the nature of evidence, about the way in which it can justify beliefs, and upon the correctness of the classical definition of knowledge. These disagreements about the status of evidence form the basis of a large debate within contemporary epistemology, to which this project is devoted.

There are several strands in the contemporary debate centred around the nature of evidence:

a) *externalism vs. internalism*. Evidence, as it is classically construed, is understood as evidence that the subject who holds a certain belief possesses, and to which he has access. This implies a form of epistemological internalism (BonJour (1999) takes a clearly typical internalist position, also does Audi (2001). Conee and Feldman 2004 are certainly internalists, although they have presented more sophisticated (not accessibilist) versions of it. Externalists in epistemology can agree that evidence is the main justifier of a belief, but they do not agree that a subject needs to have access to the evidence for her belief. According to the causal and reliabilist views of justification, evidence is not even the main justifier: it is the causal history, or the proper function, of a belief which gives it the status of knowledge (Goldman 1986, Plantinga 1993, Olsson 2007).

b) *foundationalism vs. coherentism*. Evidence can be construed as a vertical relation between individual beliefs and their justifiers in the classical foundationalist sense. It can, alternatively, be construed as a horizontal relation between sets of beliefs, in a coherentist way (Lehrer 1991).

c) *probabilistic vs. non probabilistic accounts*. Locke held that what constitutes evidence for a belief is its "ground of probability" and defended a doctrine of degrees of assent to a proposition. Contemporary Bayesian probabilism (Jeffrey 1992), which is indeed very discussed in the context of accounts of confirmation in the philosophy of science, construes the evidential relation as measured by a belief's degree of subjective probability, and takes revision of belief to function via conditionalisation. Non probabilistic accounts take either a foundationalist (Chisholm, Fumerton, Conee and Feldman 2004) or a coherentist form (Harman 1986, Gärdenfors 1988).

d) *deontological vs. non deontological*. A classical evidentialist theme (present in Locke, but mostly pressed upon by Clifford's (1877) famous maxim: "It is wrong, always, everywhere, and for anyone to believe anything upon insufficient evidence.") is that an agent not only

does justify his or her beliefs from evidence that she possesses, but *ought to* do so. Internalism is often associated with a deontological theory of justification (Firth 1956). But not all evidentialists agree. Most epistemologists take the notion of justification to be normative (Alston 1989), and epistemic evidentialism is often understood as a normative view: it is a norm for beliefs that they ought to be based on good reasons, which consist in evidence (Kelly 2006). But there are several ways of understanding the nature of epistemic normativity (Engel 2009). One can take it to consist in obligations of a deontological kind (Chisholm), in a weaker form of obligation (Conee and Feldman 2004) or in the broader concept of reason (Skorupski 2009).

Contemporary epistemology involves a lot of discussions about the nature of evidence along one or the other of the foregoing lines. Conee and Feldman (2004) have defended an internalist evidentialism, Williamson (2000) and Sutton (2005) an externalist version according to which evidence *is* knowledge (indeed on such a view, the concept of evidence is directly associated to the concept of knowledge, and not to the concept of justification). Achinstein (1984), Maher (1996), Kaplan (1996) have assessed the role of evidence in a probabilistic setting, and a number of writers have recently discussed the status of evidence within an account of knowledge (e.g. Bird (2004), Silins (2005), Neta (2008), Kelly (2006, 2008), Hyman (1999, 2006), Comesana (*forthcoming*), Schroeder (2008), Turri (2009), Pritchard (*forthcoming*)).

Our project cannot deal with all the strands in these debates, which form, in many ways, the background of much contemporary discussion in epistemology. It is focused on the following more specific issues.

A.2. Problematic

(A.2.1) Evidence as connected with justification

Our first concern is the topic of “evidence for”, or evidence as connected with justification. Although there is a naturalistic interpretation of evidence as “sensory input” going back to Quine (1968), it is difficult to see how this position actually deals with the concept of evidence as it is understood and used within epistemology. To take evidence as a non normative, naturalistic concept simply amounts to rejecting it, and that would imply a change of investigation field (Kim (1988)). We consider evidence as normative and take this concept to be connected to another normative concept – justification. To say it differently we consider the function which evidence plays in justification. With regard to the intrinsic normative character of evidence we will explore what kind of normativity is involved in the evidence concept. Another important issue which we shall examine under this rubric is: how are we to understand the fact that evidence is always “evidence for”, never evidence *simpliciter* (Williamson 2000, Neta 2008, Littlejohn (*forthcoming*) among others give arguments for this claim). One way to understand it, which we aim to explore, consists in saying that evidence is an abbreviation of an evidential relation – to speak about evidence is to speak about the evidential relation (x is evidence for an agent S, for y (where S is a

subject, x an item serving as evidence and y a belief)).

(A.2.2) Evidence as confirmation relation

One connected issue, which we shall address at this stage, is the question concerning the probability calculus and the Bayesian epistemology of evidence, which sees the evidential relation as a confirmation relation (a recent probabilistic interpretation of evidence is Joyce 2005). A well-known problem with this proposal is that probabilistic accounts of evidence are typically led to reject the intuitive idea that evidence is closed under conjunction (according to which if one has evidence for p and evidence for q , one thereby has evidence for p and q) (Kyburg 1961, see Foley 2009 and Hawthorne 2009). However, recent proposals have been made to integrate probabilistic evidence within a “probabilistic core” of full (certain) beliefs that satisfy closure (van Fraassen 1995, Arlo-Costa 2001). We will consider whether the confirmation relation and its probabilistic interpretation is the best way to describe the evidential relation.

Although these are traditionally important concerns, it is important to examine the structure of the evidential relation.

(A.2.3) The relata of the evidential relation

The question concerning the *relata* involved in the evidential relation is divided into two sub-questions: (a) what counts as the first relatum in an evidential relation (or ontology of evidence) and (b) What having evidence consists in, i.e. what is to stand in an evidential relation.

(a) Ontology

The debate about the ontological status of evidence (what items could count as evidence, what items could fill the *relatum* role in the evidential relation) is parallel, if not similar, to the debate about the ontology of epistemic reasons (Schroeder (2008), Turri (2009), Kelly (2008)). We shall examine ontological issues and will try to delimit most the plausible views in respect also to the discussions about epistemic reasons. The fundamental questions that we shall raise include: what kind of items can count as evidence? What is their structure (propositional / not necessary propositional)? Are these items which count as evidence propositions as content of mental states (Unger 1975, Davidson 1986, Williamson 2000, Neta 2008), propositions as abstractions of content of mental states (Brandom 2000), experiences (in part Conee and Feldman 2004, traditional foundationalists), objects (naïve realists, disjunctivists), facts (externalists), beliefs, mental states (Pryor 2007, Turri 2009)? Parallel to the question about structure of items, or conditions that items must satisfy to count as evidence, we shall examine also the question about the relation these items have with the mental states. This question is at the crossroad between ontology and the question of possession of evidence, since the answer we give to it, will delimit our position with regards to both questions.

(b) Possession of evidence

What does it mean to possess evidence (and how does a view about possession of evidence determine which items could be counted as evidence), and what is the status of

the requirement that evidence has to satisfy in order to be possessed? A first issue is whether possession is essential to evidence, that is, whether nothing can be evidence for some proposition unless it is someone's evidence for that proposition. Traditional internalist views tend to say that it is, but externalism, bayesianism and some variants of internalism say that it is not. If evidence has to be possessed, is it private? Or can evidence be public or shared? A second issue is what possession of evidence consists in. Does possession of evidence require, or consist in, somebody's having access to it? Traditional internalist views (Chisholm 1977) require that one's evidence should be accessible by reflection alone. Others require that one should be "aware" of one's evidence. But what is access or awareness here? Is it distinct from knowledge? Or is it such that two internal twins have by definition access to the same evidence? If the later is correct, one's evidence cannot depend on one's environment. But in this case how should we understand the role of environment in determination of one's evidence? However, if access is conceived in less strict terms, or if it is not necessary, evidence need not be substantially internal to the subject. We shall explore these questions and some of the answers to them.

The main distinctions that we shall deal with while trying to answer these questions about possession of evidence are: the distinction between externalism about evidence vs. internalism about evidence (Silins 2005) and the distinction between mentalism vs. accessibilism (Feldman and Conee 2004, chap. 4). If to possess evidence we have to be aware of it then clearly we need accessibilism. Accessibilism in turn seems to require "a phenomenal account of evidence", according to which evidence strictly consists in one's current phenomenal experience. Another way we can put it is to say that accessibilism implies a conception of evidence according to which what evidence one possess supervenes on one's non-factive mental states. But this position has been deeply challenged by evidence externalists (a paradigmatic example is Williamson 2000). According to them, our phenomenal experiences are not accessible to us, thus cannot count as evidence in an internalist sense. A further question is whether the evidentialist's distinction (Conee and Feldman 2004, ch. 9) between total possible evidence and total evidence (which we should understand as an evidence set which results from the intersection between available (psychological availability) and acceptable (which one believes rationally) parts of total possible evidence could offer advantage for this view. Despite these clarifications, we should probably nevertheless take seriously into account the externalists challenge and ask whether we have conscious access to our evidence. Perhaps we should accept mentalism without accessibilism? If so, evidence consists in one's mental states, whether one has access to them or not. That view appears to vindicate internalism about evidence (Feldman and Conee, chap 4). However, if knowledge itself is conceived as a mental state, as Williamson (2000) argues, mentalism reduces to externalism about evidence. Despite its attractiveness, Williamson's position is probably too strong. We could instead adopt another not-privileged-access position, because it is difficult for example to accept that we have no access to inferential knowledge (Littlejohn, *forthcoming*), or because an internalist notion of

evidence appears required to avoid the counter-intuitive consequences of an externalist position (Comesaña, *forthcoming*). We will examine this issue and shall try to give an elaborated view about the possession of evidence.

SUBPROJECT B. Knowledge and Pragmatic Encroachment

Main researcher: Pascal Engel,

Associate researchers: Arturs Logins, Julien Dutant, Davide Fassio

B.1. Pragmatism about belief and knowledge

A number of themes in the theory of belief and in epistemology in general suggest the importance of practical, prudential, and action related factors within our conception of belief and knowledge, and in particular:

- (i) Pascal's wager and ethics of belief debates: it can be (practically) rational for me to believe that God exists, in spite of my lack of evidence for it.
- (ii) Voluntary believing and self deception: in some circumstance it may be prudentially useful to believe, including in apparently irrational beliefs like self deceptive beliefs: the self deceiver may be (practically) rational in ignoring evidence against her belief that not p , when she believes that p and desires to believe that not p .
- (iii) Within the classical decision theoretic conception of belief: S believes that p iff S prefers as if p .

According to what one may call strong pragmatism, there can be rational beliefs in such cases: "All things considered it can be rational for an individual to believe what is not epistemically rational for him to believe" (Foley 1987: 214).

Many evidentialists indeed object to this conception of rationality. On the evidentialist conception of belief, S believes that p iff S has evidence for p , and moreover S ought to believe that p only if S has evidence that p .

B.2. Pragmatic encroachment

Now one can define pragmatism about justified belief as the thesis that:

(JB) S is justified in believing that p only if S is justified to prefer as if p

There is a distinctive counterpart thesis for knowledge, pragmatism about knowledge:

(KP) What makes someone's true belief a case of knowledge is partly determined by facts from the domain of practical rationality

In both cases there is an issue whether we are dealing with descriptive or with normative theses. The philosophers who defend these theses consider themselves to be opposed to the classical thesis which they call "intellectualism": epistemic reasons are different from practical reasons, and knowledge is not a matter of practical interests. The evidentialist version of this thesis is that two people, internally identical and having the same evidence should have the same justification, and know the same things. But the philosophers

who defend “pragmatic encroachment” (Fantl and Mc Grath 2002, 2009, Stanley 2005) claim on the contrary that factors which come from *outside* evidential relations play a role in our assessment of knowledge, as a matter of fact and as a matter of our ordinary intuitions, but also *should* play a role (hence their view is normative as well). They give examples based on the familiar contextualist “intuition pumps” on differences of intuitions depending on the context of what is practically at stake, of the following sort.

Train Case 1: You are about to board a train in order to go on vacation. You hope that the incoming train, bound for Geneva, is express, though it doesn’t much matter to you. You ask the Swiss businessman next to you whether the train is express, since he looks like a commuter in the know, and he answers “yes” without hesitation. You take his word for it, and believe that the incoming train is express.

Train Case 2: You need to get to Geneva on extremely urgent business at the UN, but are running late. If you miss the chance to give your presentation, the funding for an important refugee relief fund could be in jeopardy. You ask the Swiss businessman next to you whether the train is express, and he answers “yes” without hesitation. Since it is very important that you board the express train—it is the only one which will get you to the UN on time—you decide to seek out additional information in order to be more confident that this is indeed the right train.

According to this brand of neo-pragmatism, evidentialism is threatened by such contrasts between our intuitive answers to such case. Practical interests influence not only our knowledge claims, but lead us to reconsider the nature of knowledge and justification.

Crucial to the pragmatic encroachment thesis is the view, defended in particular by Williamson (2000), Stanley (2005) and Stanley and Hawthorne (2006) that knowledge has to be a premise in practical reasoning.

(PR) For any act A, if X knows that if p, then A is the best thing to do, then S is rational to do A. If S knows that p, then S is justified in using p as a premise in practical reasoning.

B.3. The scope of pragmatic encroachment

To what extent do such arguments and related ones threaten classical evidentialism and intellectualism and force us in a pragmatic turn in epistemology? What is the nature of pragmatic involvement in justification and knowledge?

Evidentialists have the choice between several options. They can deny the intuitions relative to such cases, or accept them while claiming that what they show is only relative to certain knowledge attributions, and does not bear on the nature of knowledge (Engel 2009). They can reject the PR thesis. They can accept the descriptive JB or KB theses, without accepting the normative ones. They can also adapt pragmatic encroachment within an invariantist conception of knowledge, a “sensitive invariantism” granting in part contextualist intuitions, but granting the invariant character of knowledge attributions.

Pragmatic encroachers can reply that the syndrome is even more threatening, in particular for the view that beliefs come in degrees (Ganson 2007).

Pragmatic encroachment views lead to a familiar dialectic already observed within the context of debates about holism in the philosophy of mind and language: should we go into the slippery slope of introduction of pragmatic factors in knowledge and end up in full pragmatism about knowledge and justification, and to what extent can we accept moderate versions of the view?

Although the thesis that knowledge is required for practical reasoning (PR) is not entailed by the thesis of pragmatic encroachment, it has important relations with it. But it remains to be seen whether the PR thesis is correct. It has been criticised, in particular from a Bayesian point of view (see in particular Douven 2008) and it is by no means evident that it has the strong implications which its proponents draw from it.

The debate has important, although not completely clear connexions with the issue whether knowledge is the norm of assertion (Williamson 2000, Brown and Cappelen to appear), with debates about contextualism, with the lottery paradox and with “epistemic consequentialism”. But it has clear implications for what is at stake in the two other subprojects A and C. For A it seems clear that evidentialism may stand or fail upon whether it can take up the challenge. For C, there have been, to our knowledge, only very few attempts on the part of the pragmatic encroachers to link these issues with the nature of practical knowledge, of practical reasoning and of the involvement of action within cognition (see however Fantl 2009).

SUBPROJECT C. Theoretical and Practical Knowledge

Main researcher: Santiago Echeverri (postdoc)

Associate researchers: Ariel Cecchi, Pascal Engel, Anne Meylan

Our project has two aims: to examine the motivations to draw a line between theoretical and practical knowledge, and to evaluate the merits of intellectualist and pragmatist accounts of the mind. The contrast between theoretical and practical knowledge will be investigated from two complementary perspectives:

C.1. Conceptual and normative aspects

We shall investigate the family of concepts associated with practical knowledge, such as *capacities*, *abilities*, *skills*, *know-how*, and modals like *can*, in order to clarify their relations and differences with more theoretically oriented notions, such as *rules*, *representations*, and the *propositional attitudes* (know-that, belief, desire, intention, etc.). If one takes ‘theoretical knowledge’ and ‘practical knowledge’ as umbrella terms, it is possible to examine three main strategies:

1. Strong Pragmatism: *reduces* theoretical knowledge to practical knowledge (Ryle 1949).

2. Strong Intellectualism: conceives of practical knowledge as a *species* of theoretical knowledge (Stanley and Williamson 2001; Stanley *forthcoming*).
3. Intermediary Positions: although the distinction between practical and theoretical knowledge is important, it should be possible to develop a unified theory of the mind, in which both notions find their place. Examples of this strategy are gradualist views, according to which the notions of practical and theoretical knowledge are located along a continuum (Cussins 1990, 1992; Bermúdez 2003; Noë 2005).

In this preliminary part, the following questions will be addressed ('F' should be understood as a variable ranging over actions):

- Traditionally, know-how and abilities have been introduced to account for *intelligent* action (Ryle 1949). This raises a series of questions concerning the *scope* of practical knowledge: What sorts of actions can be analyzed in terms of know-how and abilities? What conditions must be satisfied for someone to know how to *F*? What are the conditions to be able to *F*?
- Long-established analyses assume that *know-how* and *know-that* as disjoint notions. More recently, it has been argued, however, that this view is in error because know-how constructions take propositions as complements (Stanley and Williamson 2001; Stanley *forthcoming*). This raises a number of questions: Do know-how constructions denote propositional states? Should we trust linguistic analyses to decide whether know-how and know-that are disjoint notions? (For negative answers, see Rumfitt 2003 and Noë 2005).
- Traditional analyses of knowledge study the sorts of entailments that follow from an attribution of know-that. Usually, it is assumed that if *S* knows that *p*, one can infer that *p* (factivity); further, according to some analyses, knowledge that *p* entails belief that *p*. One could therefore ask similar questions in relation to practical knowledge: Does know-how to *F* entail the ability to *F*? Are there forms of know-how to *F* that do not entail ability to *F*? (See Bengson and Moffett 2007) Is there an analogous of factivity in the practical domain? Are there conceptual connections between knowing how to *F*, and propositional states like desire and belief?
- One of the landmarks of contemporary epistemology is the work of Edmund Gettier (1963), who provided a series of influential counterexamples to the traditional analysis of theoretical knowledge as justified true belief (JTB). If know-how were a species of know-that, it should be possible to devise Gettier cases for know-how, abilities, and modals like *can*. What do these cases (or the lack thereof) teach us about the relation between practical and theoretical knowledge?
- According to some views, it is possible to consider two concepts *C* and *C'* as bearing an analytic relation and, still, deny that one can analyze *C* as the conjunction of *C'* and other concepts. An example is the conceptual relations obtaining between so-called determinations and determinables, like *red* and *colored*. Although all red things are colored, it is not possible to provide an analysis of *colored* as the

conjunction of *red* plus other features. Some philosophers have argued that similar remarks apply in the case of (theoretical) *knowledge* and *true belief* (Williamson 2000). Although they are conceptually linked, one cannot define *knowledge* in terms of *true belief* plus further features. Similarly, one may ask: is *know-how* related to *know-that* in the same way as *red* is related to *colored*? (Stanley and Williamson 2001). Or, alternatively, is *know-how* related to *know-that* in the same way as *blue* is related to *red*?

- Ryle (1949) originally suggested that practical knowledge could be analyzed as a disposition like *soluble* and *fragile*. This raises important questions concerning the normativity of practical knowledge. Since *know-how* is a normative concept, it is *prima facie* controversial to assume that it is a mere disposition as *soluble* and *fragile* (Millikan 2000), which are not normative notions. This raises some questions: What norms do govern the possession of practical knowledge? Could a dispositional account explain these norms? If not, how should it be supplemented to illuminate the normativity of practical knowledge?

The overall hypothesis of this part is that a form of gradualism is right. It is possible to delineate the geography of practical and theoretical knowledge starting from simpler non-normative dispositions, through abilities and know-how, up to sophisticated forms of know-that. As a result, both strong pragmatism and strong intellectualism are in error, since they fail to recognize the specificity and interrelations of practical and theoretical knowledge.

C.2. Metaphysical and psychological aspects

The way one draws the distinction between practical and theoretical knowledge presupposes a conception of the nature of the mind. In contemporary philosophy of mind, a good example of intellectualism is functionalism. It explains intelligent behavior as a rule-governed process in which each task is factorized into sub-tasks (see Fodor 1975; Bermúdez 2005). Opposition to this program comes from what can be called *Ryle's challenge* (Ryle 1949: 30-ff.), i.e. the claim that intelligent behavior cannot (always) be factorized into (1) a representation of a rule or proposition, and (2) the application of that rule. Ryle's challenge raises a number of foundational questions in the philosophy of mind. Here are some questions we would like to investigate:

- Can some forms of intelligent behavior be reduced to dispositions, as Ryle claimed? For that purpose, it is necessary to take some examples of intelligent behavior, and see whether they can be explained in dispositional terms. Our case studies will be drawn from conceptual and linguistic competence. These cases will be studied from an interdisciplinary perspective (for further details, see the text below).
- What are the prospects for mental causation within dispositional accounts of the mind? Are dispositions causally efficacious? This question will be addressed in connection with Fodor's (2008) claim that, since dispositions are causally idle, if

psychological states are analyzed in dispositional terms, they are not real. But, since they are real, they cannot be analyzed in dispositional terms.

- As indicated in the introduction, most contemporary theories individuate mental states by their direction of fit. This raises the question whether it is possible to draw the line between directions of fit within pragmatist accounts of (some pieces of) intelligent behavior. If not, new criteria to analyze psychological phenomena are required.
- Some philosophers have tried to reconcile a form of functionalism with the attribution of practical knowledge to intelligent organisms (see, e.g., Devitt 2006). This raises the question whether these projects are mutually coherent, or whether they presuppose different metaphysical views of the mind.

The significance of these questions can be best appreciated from a historical perspective. After the cognitive revolution, many philosophers thought that, if one conceived of cognitive processes as computational transformations of mental representations, it would be possible to provide a naturalistic account of the mind, by reducing cognition to mechanical processes. If Ryle were right, however, this program would be deemed to failure. Either cognition should be explained in physiological or neural terms (as reductionists claim), or it should be seen as irreducible. In either case, there would be no independent domain of inquiry that could be aptly characterized in terms of representations of rules or propositions. That is why some proponents of functionalism engaged in debate with Ryle's distinction between know-that and know-how, and described their own program as a defense of know-that (Fodor 1968, 1975).

Nowadays, it is widely acknowledged that functionalism has been unable to account for many aspects of the mind, such as creativity, the phenomenology of experience, or abduction (inference to the best explanation). As a result, functionalism has been confined to study only some peripheral aspects of cognition (Fodor 2000, 2008). This raises the question whether some pragmatist ideas could be introduced without falling prey to the objections directed against strong forms of pragmatism.

Some theorists influenced by phenomenology (Polanyi 1958, 1966; Dreyfus 1992; Clark 2003; Noë 2004) have introduced practical knowledge to account for some features of the mind, such as perceptual experience, spatial reasoning, motor skills, and expertise. Dreyfus (1992) suggested that the emphasis on rules and knowledge of facts is responsible for the failure of traditional artificial intelligence (AI) to model higher-order forms of cognition. In the analytic tradition, it has been customary to argue that some form of practical knowledge can account for the phenomenal aspects of consciousness (Lewis 1990). Other theorists have even claimed that practical knowledge provides some *explanatory* tools that are unavailable to the functionalist theory of mind. This is one of the motivations for Searle's (1978, 1983, 1992) claim that the understanding of sentences cannot be accounted for if one abstracts from a background of practices and non-representational abilities.

Some critics have stressed, however, that pragmatism is unable to account for *higher* forms of intelligent behavior. On their view, practical knowledge would have a limited applicability, and it would collapse if one tried to apply it to explain conceptual and linguistic competence (Fodor 1975, 2008). If they were right, this would yield a picture in which higher forms of cognition are given an intellectualist analysis, while lower-level forms of cognition could be elucidated in pragmatist terms. At least three influential arguments could be invoked for this intellectualist view:

- A1.** Some theorists think that introducing practical knowledge to elucidate linguistic and conceptual competence would lead to behaviorism, a theory that is taken to have been refuted at the beginning of the cognitive revolution (see Chomsky 1959; Fodor 2008). Chomsky is reputed for having demonstrated that it is a mistake to reduce cognitive processes to stimulus and response variables. Although this conclusion is right, Chomsky's Cartesian approach to cognition has been challenged by recent work on language acquisition and primate cognition, which introduces a usage-based approach to the acquisition of grammar (see Tomasello 2003, 2008).
- A2.** Some people working in the philosophy of linguistics think that the notion of practical knowledge is unable to reflect the *rationality* of language mastery (Dummett 1992; Dokic 2001; Smith 2006). Others claim that the divide between know-that and know-how is too coarse-grained for the purposes of theorizing on the mastery of language (see Barber 2003, and references therein).
- A3.** Practical knowledge cannot explain the productivity of language and thought (Stanley 2005; Fodor 2008), i.e. our capacity to compose an indefinite number of sentences or thoughts from a finite stock of constituents (like morphemes or representations) (for an opposite analysis, see Hornsby 2005).

In order to examine the cogency of these three lines of argument, it is necessary to clarify some background issues, which are usually left implicit in discussions on this topic:

To be sure, both pragmatism and behaviorism are led by the idea that action is one of the most basic features of our cognitive life. Nevertheless, it would be inadequate to cite this sole fact to conclude that that pragmatism necessarily leads to behaviorism (*pace* Block 2001). If one distinguishes different claims associated with behaviorism, it is possible to rebut the main line of argument implicit in A1 and A2:

- It is necessary to distinguish two different uses of practical knowledge to account for linguistic competence: the (implausible) idea that linguistic competence is on a par with motor abilities, such as riding a bike, and the (more plausible) idea that linguistic competence shares some *structural features* with practical knowledge. One could use this distinction to argue that the elucidation of linguistic competence in terms of practical knowledge does not necessarily lead to behaviorism.
- Some versions of behaviorism were opposed to the explanation of behavior in terms of inner states. There is, however, no direct connection between explaining an action in terms of practical knowledge, and banning inner states from psychology. As a

matter of fact, some empirical models of skill acquisition do exploit neural networks, which may be considered as characterizations of inner states (Grush 2007) that do not embody the representation of rules or propositions.

- Behaviorism can also be construed either as a metaphysical or as an epistemological claim. As a metaphysical claim, it denies the mediation of inner mental episodes in the production of behavior; in an epistemic sense, it maintains that, although mental states might mediate the production of behavior, they “are not amenable to scientific treatment” (Russell 1919: 291). In this weaker sense, the behaviorist challenges the scientific status of functionalism without thereby committing herself to the stronger metaphysical claim.
- Most behaviorists defined behavior in a narrow way. So, in his studies on language, Watson defines ‘implicit behavior’ as “involving only the speech mechanisms (or the larger musculature in a minimal way; e.g., bodily attitudes or sets)” (Watson 1914: 19). But there is no reason to assume that the introduction of practical abilities leads to this narrow understanding of action. If I ascribe Pierre the ability to ride a bike, the action denoted by the infinitive ‘to ride a bike’ belongs to the intentional order and, as a result, it does not lead to the narrow conception of action defended by behaviorists.
- Behaviorists used to reject the role of phenomenal properties in the cognitive life of organisms (for discussion, see Thomas 1999). This denial took many forms. Some psychologists argued for the inexistence of mental images, while others denied the importance of introspection as a source of knowledge (see Watson 1914: 174 fn). It would be puzzling, however, to criticize pragmatist ideas on this count. First of all, functionalist accounts of the mind have tended to neglect the role of phenomenology as well. In this respect, behaviorism and functionalism are on an equal footing. Second, defenders of practical knowledge usually emphasize that acquiring a skill changes the phenomenal character of experience (see Polanyi 1958, 1966; Clark 1999, 2003). Hence, there is no direct path from the explanation of intelligent action in terms of practical knowledge to the denial of images or phenomenology in the cognitive life of organisms.
- Behaviorism and some forms of pragmatism are sometimes interpreted as leading to a form of anti-realism concerning folk psychological notions such as belief and desire. In some cases, it is argued that there is nothing like *occurring* desires (see Russell 1921: 122). If one advocates a form of gradualism, however, this anti-realism is not mandatory. According to gradualism, practical and theoretical knowledge, albeit irreducible, do co-exist within a single picture of the mind. Higher forms of intelligent behavior such as decision-making or inference may be best modeled in terms of theoretical knowledge and, as a result, they might require the postulation of occurring propositional states. As a matter of fact, it has become customary in studies on infant cognition (Spelke 2000; Spelke and Van de Walle 1993) and

cognitive ethology to infer the presence of some form of theoretical knowledge from the fact that pre-linguistic infants and non-linguistic animals are able to engage in decision-making routines (Horgan and Tienson 1996). This is, however, compatible with the introduction of practical knowledge in other domains of cognition (Bermúdez 2003).

Concerning A2, one might argue that the introduction of practical knowledge to account for linguistic competence does not threaten the rationality of language mastery. An argument for that view is that practical knowledge is particularly attractive to block *regress problems* in rule-following, like Carroll's paradox (Carroll 1895), which arises when one conceives of the application of logical rules as preceded by an explicit representation thereof. Some theorists have also claimed that practical knowledge provides an alternative account of reference to influential descriptivist and referentialist theories (see Evans 1982; Putnam 1996; Millikan 2000; Echeverri 2010). Unfortunately, pragmatically oriented accounts of reference have not been elaborated in detail, due in part to the lack of clarity on the conceptual and metaphysical aspects of practical knowledge.

Concerning A3, it is unclear whether accounts of conceptual and linguistic competence in terms of dispositions are unable to accommodate the compositionality of language and thought (assuming that the latter is compositional). In his well-known reconstruction of Wittgenstein's rule-following considerations, Kripke (1982) rejected dispositional accounts of meaning on the ground that dispositions are finite and, hence, are unable to account for the infinite productivity of rules. According to Kripke's line of argument, one cannot explain my capacity to follow the rule '+' in terms of my actual dispositions, since "some pairs of numbers are simply too large for my mind—or my brain—to grasp" (Kripke 1982: 26-7). If pragmatists construe linguistic and conceptual competence in dispositional terms, they are faced with a dilemma: either to reject productivity, or to show that dispositions can preserve a weaker (but still interesting) form of compositionality.

Recent work done by pragmatists suggests that these questions cannot be addressed if one does not ask before whether abilities (and/or other forms of practical knowledge) have constituent structure. If they have a constituent structure, they could be recruited to account for compositionality. As a result, an investigation into the 'mereology' of practical knowledge is needed to decide whether practical knowledge can account for compositionality (for a recent discussion, see Brandom 2008).

2.4. SCHEDULE AND MILESTONES

We plan to proceed along the following agenda:

The research on all projects will be undertaken in parallel, but we intend to put the main emphasis on the first year (2010-11), on issues in evidentialism on projects A and B, and to concentrate research on project C on the second year of the project.

Subproject A on Knowledge, Evidence And Justification, will be centered on Arturs Logins's work on his dissertation on Evidentialism, which will be written during the period 2010-2013 of the project. Julien Dutant, Davide Fassio, Ariel Cecchi and Anne Meylan will be involved in this project.

Arturs Logins will organize the first year a conference on Evidentialism in autumn 2010. Some of the proposed speakers are: Earl Conee, Alvin Goldman, Trent Dougherty, Thomas Kelly, Nicolas Silins, Alexander Bird, John Hyman. Others activities will be a round table in the first year, and two workshops in the second and third year.

Subproject B on Knowledge and Pragmatic Encroachment. The main researcher responsible for that subproject is Pascal Engel, together with Arturs Logins, Julien Dutant and Davide Fassio.

Pascal Engel will devote his MA-doctoral seminar of summer 2011 to the topic of knowledge and action.

This subproject starts with a two days workshop which is planned to take place in 2010. A summer school will be organized in summer 2011 on *Pragmatic Encroachment*. Some of the proposed participants are: Jason Stanley, Igor Douven, Christopher Kelp, Jeremy Fantl, Matthew Mc Grath, John Hawthorne and Timothy Williamson.

Subproject C on Theoretical and Practical Knowledge. Santiago Echeverri is responsible for this part. He will organize a workshop in the second year, a round table in 2012 and a conference on *Knowing How* in 2013. The proposed speakers are: Anton Leist, Hans-Johann Glock, Michael Devitt, Ruth Millikan, Jerry Fodor, Christopher Peacocke and José Luis Bermúdez.

We expect to produce, during this period, a number of publications

1. Pascal Engel will write an introduction to the philosophy of psychology (Palgrave MacMillan) where he takes up the issue of tacit knowledge related to project C. He will give a number of conference presentations on these issues.
2. Arturs Logins will publish articles related to his thesis.
3. Santiago Echeverri will write articles related to project C. He will also rewrite his dissertation in book form and will publish it.

2.5. IMPORTANCE AND IMPACT

Besides its philosophical underpinnings, the present research project seems to us to be relevant and have a potential impact in the following domains:

1) Education

The discussion of practical and theoretical knowledge is widely used in disciplines like pedagogy and education, where the differences between propositional learning and skill acquisition is very important. Hence, a better understanding of these distinctions might be of interest to researchers and teachers in the sciences of education.

2) *The psychology of implicit knowledge*

The distinctions between explicit and implicit knowledge, between declarative and procedural knowledge loom large in all fields of psychology, besides those mentioned in the project. In the last few years, a new movement called 'situated cognition', based on the theory of skills, has emerged in the cognitive sciences. Here too a theoretical and philosophical understanding of these issues is called for and might be of interest for cognitive scientists interested in the foundations of their disciplines.

3) *Sociology and practical knowledge*

The social sciences, in particular sociology, economics, anthropology and history, have made a wide use of notions such as those of *habitus*, dispositions, skills and practical knowledge. Many social scientists claim that a large part of our social knowledge is practical. Is this correct? Our project may be relevant for a critical reflection on the use of such notions in these disciplines.

4) *The knowledge society*

It is a commonplace that we belong to "the knowledge society". What kind of knowledge is transmitted, stored, and spread? What is the difference between knowledge and belief in the transmission of information?

5) *Legal evidence*

In legal domain it is common to appeal to evidence in order to make a judgement. Given the importance of the topic, many precise classifications of items which one could count as evidence have been established. Nevertheless, our research could be of interest for sharpening of evidence concept in the legal domain. How to understand that an object could count as evidence in a court? Is it really an object, or a fact or a believed or known proposition that is evidence? If it is a particular object, then in virtue of what this object count as evidence? Furthermore, the foundational questions about evidentialism (it's correctness) could have methodological implications in the legal domain.

6) *Practice and Evidence in Medicine*

In recent years, an important topic has been raised in medicine, namely the question about what justifies a medical practice. A new sophisticated framework has been developed, which is characterised by a consideration of a medical practice as justified only when a practitioner is basing his decision (at least partly) in sufficient scientific evidence which has been gathered concerning the topic at issue.. Similarly, a series of studies on the role of expertise in medical diagnoses have been carried out, lending support to the claim that some of the medical judgments are based on domain-specific pragmatic heuristics. Thus, understanding the nature of evidence and practical knowledge could be useful to clarify the medical practice.

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