BELIEF-REVISION, EPISTEMIC CONTRIBUTION, AND POLYNORMATIVITY

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ABSTRACT
Given the limited inferential capacity of any human epistemic agent, the best social epistemic system includes as many human epistemic agents as possible and has them "working under" diverse epistemic norms. In this text, this claim is argued for through presenting a pragmatist and instrumentalist argument for Epistemic Contribution and, consequently, the diversity of epistemic norms (polynormativity). Through universal inclusion and polynormativity we raise our chances of the revision of false belief. Furthermore, showing how neither Dewey's democracy nor Hayek's markets can by themselves sustain not slipping into epistemically distortive social arrangements, I argue, along Mill, that there should be an institutional order that primarily maintains universal inclusion and polynormativity. Certain tentative requirements of this institutional order are discussed.

KEYWORDS
Epistemic contribution, pluralism,epistemic diversity, normative diversity, institutional order

1. INTRODUCTION

We should organize society as to raise our chances of revision of false beliefs. I argue that in order to do this, at least two "mechanisms" are required at the outset – universal inclusion and the maintenance of normative diversity. This is because given the limited inferential capacities of any human epistemic agent (and, arguably, any epistemic agent), the best social epistemic order, even by standards of a self-interested agent or an epistemocrat, would include as many epistemic agents as possible and, at

that, have them "working under" diverse epistemic norms. Our institutional order, furthermore, should reflect this.

The case for this social epistemic order need not be grounded in *any* controversial theory of truth, but merely by the notion that any truth will be inferred, and thus a result of a revision of a false belief (later in the text, *belief-revision*). The epistemic value derived from the epistemic cooperation under conditions of necessarily limited inferential capacities of any epistemic agent is *minimally* the one of movement *away from* false beliefs, and thus of recognizing and revising false beliefs. Epistemic cooperation is here understood as a fact of social life – we are engaged in it in any political or social arrangement, and the question is how to make it better. This article is an effort at devising a case for epistemic cooperation upgraded through universal inclusion and nurturing of the epistemic diversity, where epistemic diversity includes cognitive diversity, roughly put a biological difference among inferrers, and normative diversity, roughly put a difference among epistemic norms of different communities, and I will in this text focus more prominently on the normative diversity.

In this text's specific line of argumentation, I will approach the question of universal inclusion form the perspective of Fricker's Epistemic Contribution, and attempt to give an instrumentalist argument for it, using (as far as I can tell) the least controversial version of pragmatist epistemology. If this argument is correct, I will attempt to show, it implies accelerating and harvesting normative diversity, and thus it implies an institutional order of polynormativity.

The plan of the text is as follows.

I will first sketch out the state of the debate concerning epistemic diversity and universal inclusion by commenting on Mill's, Hayek's and Dewey's accounts. I believe all three are aware of the instrumental epistemic value of both epistemic diversity and inclusive social arrangements. However, Hayek and Dewey focus exclusively on certain institutional orders insufficient to stave off threats to the maintenance of epistemic diversity. Mill, on the other hand, focuses on the political argument for the institutional order that would maintain epistemic diversity.

I then attempt to present the epistemological argument for epistemic, and normative, diversity and universal inclusion. It is a reworking of Mill's, Hayek's and Dewey's, augmented with least controversial form of pragmatist epistemology. It hinges on the concept of *belief-revision*. I present the argument in the condensed form, comment on it, and then present a somewhat looser reconstruction, in order to make explicit certain descriptive-epistemological commitments.

The final part of the text tries to give a rough sketch of just a few tentative requirements (and themes worthy of research) for the institutional order that would maintain normative diversity and universal inclusion.

2. INSTRUMENTAL VALUE OF EPISTEMIC DIVERSITY AND UNIVERSAL INCLUSION: A HISTORY

The following text will claim that Epistemic Contribution (EC) is epistemically beneficial from system-level point of view, and that this is so because universal inclusion entails development of epistemic, and more specifically *normative*, diversity in the system. Normative diversity is the carrier of epistemically valuable rise in chance of revision of false belief, and Epistemic Contribution is the carrier of normative diversity.

Landemore argues a similar point with regards to "democratic reason" and *cognitive* diversity (Landemore 2012a, Landemore 2012b). Cognitive diversity entails universal inclusion, because an increase in number necessarily increases cognitive diversity. Cognitive diversity entails *different* minds interpreting (inferring) norms. The difference here is that I argue that epistemic benefit increases even more with different minds interpreting *different* norms, and thus for normative diversity on top of cognitive diversity. Also, I would like to argue that this is beneficial to our comprehensive social epistemic cooperation, which entails democratic practices but is not reducible to them.

Epistemic Contribution is introduced as a concept in Fricker's text "Epistemic Contribution as a Central Human Capability", where she argues for Epistemic Contribution as "the exercise of (...) social epistemic capability on the part of the individual to *contribute to the pool of shared epistemic materials* – materials for knowledge, understanding, and very often for practical deliberation" (Fricker 2015, p. 76). As the title suggests, she proposes adding EC to the list of "'central human functional capabilities' – the capability set presented as necessary for human flourishing and on that ground definitive of an international standard for justice" (Fricker 2015, p. 74). The discussion of capabilities, and of Capabilities Approach, is beyond the scope of this text. Likewise, for purposes of this text I will mostly not comment directly on Fricker's sophisticated and masterful text. I will focus exclusively on developing the argument from instrumentality for EC.

In discussing, among others, a Millian defense of Epistemic Contribution, Fricker touches upon its instrumental value. Since only free speech allows for the correct *reasons* for believing x to emerge, knowledge is attainable only through exercise of free speech, and therefore "wherever there is a significant failure of Epistemic Contribution, the very point of free speech (*to produce knowledge in the social body*) is compromised" (Fricker 2015, p. 84, my italics). Knowledge is thus conceived as a

result of the free competition of reasons and beliefs that requires as many minds to question and nominate those reasons and beliefs – a consequence, therefore, of *cooperation of many minds*. Mill writes that "(c)complete liberty of contradicting and disproving our opinion is the very condition which justifies us in assuming its truth for purposes of action; and on no other terms can a being with human faculties have any rational assurance of being right" (Mill 2003, p. 102).

In his text "Liberalism and Epistemic Diversity: Mill's Skeptical Legacy" (Kelly 2006), Kelly pits Millian defense of epistemic diversity against Hayek's and Dewey's conceptions of human social epistemic systems, both of which are sensitive to the epistemic benefits of epistemic diversity, but present certain failings in incorporating the primacy of diversity in their institutional order.

The aspects of Kelly's account particularly relevant for our present discussion could be presented as follows. Mill argues for *maintenance* of epistemic diversity. Both democracy and markets are of great utility for harvesting the knowledge dispersed through the population; however, neither democracy nor markets are sufficiently resistant *by themselves* to being monopolized or hijacked by powerful and malign groups. Thus, neither of them could be trusted to maintain epistemic diversity – there has to be an institutional order that utilized the social and epistemic benefits of both democracy and markets, but which was in the same time built to protect and maintain the epistemic diversity. Mill's reasons for this are political – epistemic diversity "is not merely (...) a good that contributes to the criticisms and growth of knowledge, rather it is offered as part of the defense against tendencies to social and political conformity" (Kelly 2006, p. 255).

Hayek's understanding of markets as epistemic mechanisms for managing the knowledge dispersed through the society which no single mind can gather or process disregards the distinct possibility that markets could erase diversity, and thus undermine its fundamental *epistemic* value. The resulting monopolies, beside being politically unjustified, are epistemically distortive[1]. Markets could destroy the epistemological function of the market. Kelly notes, interestingly, that this is the result of Hayek's mono-institutionalism, and that since Mill "attaches no special

[1] Now, there is more to be said about Hayek's sophisticated understanding of the epistemic life of the society, and while his perscriptive anti-statism was retained throughout his life, I believe that the later Hayek, a relevant philosopher of normative systems, has a lot to teach us with regards to the descriptive philosophy of society that I find very useful in thinking about social epistemic systems. Numerous understandings in this text are derived from later Hayek's insights and developments in philosophy they relevantly contributed to. While reading his original works is surely in order (see Hayek's "The Use of Knowledge in Society" [Hayek 1945] for the succinct presentation of the theory of market as an epistemic mechanism, and *Law, Legislation and Liberty* [Hayek 1982] for the standard account of normative social life), for the excellent overview of the development of his *philosophical* work on social order see Fleetwood's *Hayek's Political Economy: The socio-economics of order* (Fleetwood 1995).

epistemological authority to any institution"(Kelly 2006, p. 260), he had no problem in conceiving of any of them being distortive.

Dewey, on the other hand, found democracy to be institution that harvested diversity in the most desirable way. Universal inclusion in the social experiment of democracy was an epistemological requirement for Dewey, who conceived of inclusive public deliberation as a process of discovery of possible solutions, and of exclusion as akin to "the falsification of evidence in natural science" (Kelly 2006, p. 261). Hilary Putnam writes: "The need for such fundamental democratic institutions as freedom of thought and speech follows, for Dewey, from requirements of scientific procedure in general: the unimpeded flow of information and the freedom to offer and to criticize hypotheses" (Putnam 1992, p. 188).

Dewey is, however, concerned with maintenance of open and inclusive deliberation. He redirects part of the weight of protecting it into private ethos of citizens (where distorting the freedom of communication in daily life through abuse, fear, hatred or suspicion is "treason to the democratic way of life" [Dewey 1981, p. 227.]), but concedes that there is a need for political control over associations that threaten this openness and inclusion (which include market results and particularly influential private media). Democracy, understood by Dewey as a system of social inquiry, and therefore an epistemologically superior system of governance, had to be protected from anti-democratic tendencies if it were not to become distortive. Maintaining epistemic diversity is a pre-requisite for democratic politics.

Dewey's and Hayek's account could complement each other. There is certainly more to their theories and writings than I have sketched out here for the specific purposes of this text. Taken as presented here, however, the first thing to notice is that they are after a somewhat different kind of epistemic good in the society (very roughly put, Hayek is after economic, and Dewey is after political epistemic good), and the account of each seems to disregard the other's good. But, more to the point, both of these epistemic goods cannot be protected by their respective institutions alone. Democracy, in its non-qualified version, could be overtaken by a tyrannical majority; market, in its non-qualified version, could lead to an illegitimate distribution of power. Both as such are epistemically distortive. Kelly's Mill finds the maintenance of epistemic diversity to be the primary governing principle which would lead to an institutional order of epistemic cooperation (which would include both democracy and markets in their qualified version) that would be least epistemically distortive.

I believe all three accounts to be contributive to the debate, and I believe Mill's to be most correct in certain aspects. However, I would like to present an *epistemological*, and not political, argument for maintenance of epistemic, and normative, diversity through maintenance of universal inclusion which builds on Mill's initial argument and augments it with explicit pragmatist epistemology.

What Mill, Dewey and Hayek, as well as many others, recognize is the fundamental function that error plays in a social epistemic system. To recognize error, to able to perceive evidence-as-evidence, is to be able to infer. Without an environmental resistance to a prediction, no mind would be possible. If this mind wouldn't have been able to somehow adjust in face of at least some environmental resistance, it would not be a mind. Many minds, however, make many predictions – and thus encounter many adjustments. These adjustments are to a serious level a result of learning. The varieties of learning among varieties of minds means increasing the pool of available adjustments. Increasing the pool of available adjustments means the worst are most likely to fail. To paraphrase Hayek – it is one of the fundamental functions of epistemic diversity to show which plans are false (Hayek 1982, p. 117).

I will now proceed to deliver the reconstructed pragmatist argument for Epistemic Contribution and, therefore, polynormativity, first in its condensed form, comment on it, and then present its looser version. The brief discussion on few (but by no means all) tentative requirements of the institutional order which would respect EC and polynormativity will follow.

3. CENTRAL ARGUMENT

The best epistemic system is in the interest of every agent, if this agent can enjoy the benefits of that system's output. No self-interested rational agent would deny herself the benefit of living in the best social epistemic system.

What is the standard according to which we judge an epistemic system as better or worse?

The issue of procedure-independent instrumental value of epistemic systems (thus, the standard we are discussing) is a common concern in epistemic democracy[2]. I

[2] The particular problem among epistemic democracts with procedure-independent standard of the "correctness of the decision" that a particular epistemic system delivers according to which we should judge whether or not the epistemic system in question is better or worse then some other was probably best summed up by Peter when discussing Estlund's conception of legitimacy of democratic decision-making, which claims that democratic decision-making "can be held, in terms acceptable to all qualified points of view, to be epistemically the best (or close to it) among those that are better than random." (Estlund 2008, p. 98) Peter writes: "For Estlund's conception of democratic legitimacy to have any judgmental bite, there must be a procedure-independent right to make claims about which decisions are correct and which decision-making procedure is most likely to produce correct decisions. Interpreted in this way, the conception presupposes third-personal epistemic authority about the correctness of outcomes and about which decision-making procedure can best approximate it. But if there is such a right, democratic decision-making (...) appears either redundant or, if it is not redundant,

believe that the most convincing candidate for the standard of epistemic systems is how well they perform as belief-revision distribution mechanisms.

Belief-revision, for present purposes roughly, means changing one's mind in view of new evidence. "Belief-revision distribution" view restrains itself with regards to the variety of rich and dynamic debates in epistemology concerning particular epistemological values. Its claim is essentially moderate and minimal – it claims that every truth is the result of belief-revision.

The claim of this text is that the best belief-revision distribution mechanism is that which allows for most people to enter the epistemic cooperation. Furthermore, it will claim that once we deny access to our epistemic cooperation to any agent (a belief-reviser), we deny ourselves the particular *possible* belief-revision that she could contribute to it.

Epistemic cooperation is not exclusively population-wide decision-making (set-binding), but also includes agent's autonomous epistemic practice (subset-binding) which contribute in a myriad of ways to the overall epistemic output of the population. Epistemic cooperation, thus, includes populations (as mixed category of multiple communities and individuals), communities and individuals, cooperating in numerous ways to bring about population-level belief-revision. The institutional order of a population creates conditions of epistemic cooperation. Fully inclusive epistemic cooperation should, therefore, be reflected in the institutional order of the population.

Contributional Instrumentalist (CI) should claim that the best epistemic system, thus the system of epistemic cooperation most likely to deliver the desirable population-level belief-revision, is the one that allows for the most people to contribute, thus engage in belief-revision.

More precisely, she should claim that *whatever* the social structures of truth-tracking, they must include universally inclusive epistemic cooperation, a diversity of normative communities and substantial polynormative engagement.

More to the point, she should claim that with each person we fail to allow to develop the capability to be an epistemic contributor, we are losing the epistemic contribution this particular person could have given us. The disregard for capabilities of others is against the self-interest of each member of this society.

Contributional Instrumentalist's argument in the most condensed form could, I believe, be:

then its value must be non-epistemic." (Peter 2016, p. 139) This particular discussion, however, is very narrowly concerned with democracy. I will prefer to talk about "epistemic cooperation", as including democratic politics, but not reducible to it. However, even so, if we are to transpose my current concerns onto the concerns of a *narrow* epistemic democrat, the "correctness of the decision" in the case I'm trying to make hinges on the key question, and thus a standard for judging an epistemic system as better or worse, which is – *how likely is it that the system will revise an incorrect belief*? My claim, futhermore, will be that the more normatively diverse it is, the more likey it is to do so.

P1: If all knowledge is a result of agent-specific belief-revision,
P2 :and we deny agent X a position of a belief-reviser,
C: then we deny the population X (which agent X is a member of) the agent-X-specific set of belief-revisions.

4. CENTRAL ARGUMENT, UNPACKED

The unpacking of the central argument will now proceed in two steps. First I will comment of each premise and the conclusion, and then I will offer a somewhat longer re-telling of the argument.

P1 claims that all knowledge is a result of agent-specific belief-revision. This is a simple assertion, if rarely explicated. To learn (how to use concepts, exchange reasons, appropriately navigate the social and natural environment, and make complex usable theories about both) is to be able to revise beliefs when presented with appropriate evidence (which one can conceptualize *as* evidence). To be able to revise beliefs is to make inferences. Inferentialism leads to a specific kind of individualism – namely, only an individual can infer. A group cannot infer, it can merely distribute the inferred, specifically via *norms*. And when it does distribute it, it teaches the individual that inference X is correct. In order to learn that inference X is correct, the individual needs to be able to infer from the environmental cues (for instance, "people" "telling" "her": "the inference X is correct") that the inference X is correct. If the inference X is correct, it might be used in subsequent inferential patterns as a kind of a building block for new inferences.

"Good" inferential practices, and thus "good" *uses* of concepts and their webs of mutual entailments, are distributed with varying success through the population through various acts of learning. This does not mean necessarily that the concepts, or inferential patterns, exhaust the real-world occurrences they are supposed to make use of. They are sufficiently successful when real world offers no resistance to them that can be conceptualized by the agent and they sit well enough with a certain set of other inferences, concepts and, finally, commitments. They may be upgraded, and *are*, through individual acts of inferring. Through distribution (and, thus, enforcement), inferential practices become norms.

P2 and C go on to claim that if the beliefs of the individual are (at least to a relevant degree) built out of socially-acquired norms, and if only an individual can revise them, then Epistemic Contribution of that individual is desirable from the point-of-view of the population distributing those beliefs. Only individuals are belief-revisers, and only through individual acts of belief-revision can there be a pool of

common belief-revisions, available to all individuals to revise their false beliefs. The second step of this argument should claim that if we accept Epistemic Contribution as instrumental in this way, then we must also accept that the desirable population-level order is that of *diverse normative communities engaging in problem-solving with each other* – the order of polynormativity (OP).

So, the step I'd like to make now is that from EC to OP – and I believe this step is implicit in CI's argument. What we are after is a diversity of norms (and more precisely, *normative commitments*), and our best resource for these are minds "built" on the diversity of norms. Norms are robust, socially-acquired (even if their acquisition is based on biological abilities) guides to action that establish and upgrade conceptual schemes which allow us to deal with the environment. They play a fundamental role in forming our hypotheses about the world, making predictions, being able to rely on others, recognizing evidence-as-evidence, and establishing habits of upgrading our systems of belief[3].

If we are to imagine the totality of included minds as normatively same (strictly speaking, an impossibility by itself, given the inherent cognitive diversity of the population), CI's argument would not stand – it is their difference that matters. The number (universal inclusion) is theoretically relevant because it raises diversity. As I noted before – normative diversity is the carrier of epistemically valuable possibility of belief-revision, and Epistemic Contribution is the carrier of normative diversity.

The first crucial thing to understand here is that the emergence of the new norm can be fostered only through communities within which individuals can actually develop their particular normative commitments. This means that the social system of knowledge must allow, and, maybe more to a point, *accelerate* the flourishing of diverse normative communities. The second crucial aspect of the best epistemic

[3] This definition of norms contains what I believe to be their most relevant characteristics. Literature on norms is large and growing, and spawns numerous fields of study. The ongoing theoretical debates considered, I believe the definition presented here would mostly be regarded as plain and non-controversial. The following are only some of the most prominent works on social normativity: Bicchieri's seminal work *The Grammar of Society* offers an authoritative account of the way *social* norms work and change (Bicchieri 2006); the relation between inferentialist semantics and normative pragmatics (which is for our purposes of particular interest) is authoritatively presented in depth by Brandom in *Making it Explicit* (Brandom 2001); and North and Denzau's "Shared Mental Models: Ideologies and Institutions" (North and Denzau 1994), one of the central contributions to New Institutional Economics, gives a robust account of how "the action-outcome mappings" (probably the most general definition of norms I encountered) in mental models spread through the population to give rise to institutional relations. Also worth noting is that in "What Are Institutions?" Hodgson offers a discussion on the terminological issues regarding the difference between "norms" and "rules" (Hodgson 2006) which I will largely ignore in this text, for the sake of simplicity and because it appears strong conceptual point about the terminological difference is lacking. I will also use "norms" due to the philosophical tradition of talking about a "normative" x, as opposed to talking about "rule-based" or "rule-generating" or "rule-following" (all of which are integrated in "normative") x.

social system is that it features *zones of engagement* (ZOE) of normatively diverse communities, which roughly must include[4] 1) higher-stake explicit mutually-binding decision-making (most obviously instantiated in democratic politics), 2) lower-stake mutual exposure, engagement in problem-solving and deliberation (most obviously instantiated in public spaces, public fora and public schools, as well as various aspects of social life where different communities live amongst each other and share certain norms of engagement, social experiences, rituals or spaces), and 3) anonymous signaling between normative communities (most obviously instantiated in markets, and particularly global markets)[5]. Without *substantial* polynormative engagement, the epistemic benefit of a polynormative system is quite obviously absent.

I would now like to offer a somewhat looser rephrasing of CI's argument, a *particular pragmatist reconstruction* which largely avoids esoteric or particularly, to my knowledge, contested (at least in the pragmatist tradition) lines of theoretical inquiry. Its purpose is to make explicit further descriptive-epistemological commitments of CI. Its most controversial point will be a distinct mechanism of post-bad-bed recalibration, a technical point for "belief-revision distribution" view. Thus, it could be referred to as a Bad Bet Account (BBA)[6] of Epistemic Contribution, and therefore polynormativity.

1. Human agent learns concepts through interaction with other agents and the rest of the environment. It learns concepts as *sets of normative commitments* – to learn concepts is to learn how to *use* them (in the web of their conceptual entailments) to *do* something.

2. Concepts must be communicable – otherwise they cannot be either taught or learned, nor can they be transmitted across the population in any capacity. Thus, concepts must be (sufficiently) such that they can be *made public*.

[4] These are reflective of the procedures of harvesting of information dispersed through the population as standardly understood in the social epistemology: 1) votes, 2) talk, 3) prices (see Anderson 2006).

[5] For an outstanding account of the issue of anonymous *relationships* see Wallis 2011.

[6] I will not decisively mark the sources of each claim, both because this would lead to exegesis (which is not my intention) and because each claim is reduced to its least controversial form, and therefore cannot be solely attributed to a particular philosopher. I believe pragmatist tradition would largely agree with the majority of statements of BBA. Author that could, perhaps, be emphasized is Brandom, and in particular *Making It Explicit: Reasoning, Representing and Discoursive Commitment* (Brandom 2001), which offers the most comprehensive and convincing account of pragmatist philosophy I have encountered. BBA is also largely inspired by Sellars' seminal "Empiricism and the Philosophy of Mind" (Sellars 1963). For particularly authoritative accounts of inferentialism and "translation in transmission" from the standpoint of cognitive anthropology, see Sperber & Wilson's *Relevance: Communication & Cognition* (Sperber & Wilson 1986) and Sperber's, *Explaining Culture: A Naturalistic Approach* (Sperber 1996) respectively.

3. Normative commitments require both conceptual and material compatibility – they must be (to a certain degree) compatible with other normative commitments and their proper use must generate lower resistance from the world then their non-proper use. When (somehow apparently) incompatible, some normative commitments must be revised. Thus, *concepts are inferences.*

4. If they are both public and inferences, concepts must be robust to an extent that they can be *both* "housed" in different minds and transmitted between those minds. Each act of "housing" and transmission are acts of *translation*. There is no "housing" or transmission of the concept without some degree of its change.

5. Human agents cannot predict the future with absolute certainty.

6. Each change to the concept makes its normative commitments a new bet as to its use. And, of course, each change in the environment requires an adjustment of normative commitments or wholesale new ones. Agent has to always bet in new bets. Some normative commitments emerge as better bets then others. But within the dynamic and unpredictable environment within (*and in relation to*) which we make our bets, there cannot be a final best bet. And we cannot know with certainty before the bet is performed if it is going to be the better bet.

7. We can, however, presume that certain bets are bad bets. For – while the good bet could have been mere luck (even if we continue to count on them, as we usually do), *bad bets, if recognized as bad bets, for the most part, immediately require some form of conceptual calibration – the revision of our normative commitments.*[7]

8. Distribution of belief-revision implies constraints and boundedness in the form of the history of bad bets. (How well this is done, and which bets will be recognized as bad bets by the social world, is a matter of epistemic development, but also, to a point, of contingency. This does not deny the fundamental mechanism of the history of bad bets.)

9. In order to generate a wealth of normative commitments sufficient to handle the environment, we need *different* agents (thus, *different* minds) making *different* bets – because we cannot know which agent (or agents) will make the right bet[8]. But more importantly, we need them to make bad bets.

[7] Brandom writes: "Treating something as a representation involves acknowledging the possibility that it misrepresents – that the representational taking is a mistaking (the object represented does not exist, the state of affairs represented does not obtain). It is these attitudes of distinguishing in practice between representations that are taken to be correct and those taken to be incorrect that forge the connection between the notions of representational purport and representational success." (Brandom 2001, p. 78)

[8] Brandom writes: "(...) the collateral concomitant commitments available as auxiliary hypotheses in multipremise inferences vary from individual to individual (and from occasion to occasion or context to context). If they did not, not only the notion of communication but even that of empirical information would find no application. The significance of acquiring a commitment or making a claim whose content could be expressed by the use of a particular sentence, when it would be appropriate to do so and what the appropriate consequences of doing so would be, depends on what other commitments are available as further premises in assessing grounds and consequences. What is

10. *If we deny any agent the chance to make an epistemic bet, we deny all agents the chance to revise their normative commitments.* Thus we also deny ourselves something that is in *our best interest*.

11. Fricker's Epistemic Contribution, thus, is an instrument for the well-being of the totality of both present and *future* population.

I will now move on to discussing the few tentative requirements for an institutional order reflective of the severity of arguments for Epistemic Contribution and polynormativity.

5. THE INSTITUTIONAL ORDER OF POLYNORMATIVITY: A FEW TENTATIVE REQUIREMENTS

So we ascertained that Epistemic Contribution is a desirable trait of a social epistemic system, and that polynormativity is the requirement for it to be of value. This leaves us with an open question with regards the institutional order which would render the maintenance and harvesting of Epistemic Contribution and polynormativity possible. Full inquiry into the institutional order reflecting EC and polynormativity is, however, beyond the scope of this text. I will merely make explicit and briefly comment on some of its more obvious tentative requirements (or at least, themes that should be seriously discussed further). These have not, in any sense, defined the institutional order in question sufficiently, nor are they, by any means, exhaustive – other requirements of OP will certainly emerge through further research.

The pursuit of the institutional order of polynormativity is the pursuit of the higher-level "rules of the game" (North 1990) of a polynormative society of inclusive epistemic cooperation. Institutional order of polynormativity is the one which is adaptable to dispersed knowledge from both democracy and the market, as well as numerous other discovery and change processes, but maintains normative diversity and Epistemic Contribution. From the agent's perspective, the institutional order must maintain both that 1) the failure of nominated norm is evident (for otherwise, the signal is distorted) and 2) that *the cost of failure of a nominated norm does not exceed the benefit of nominating a new one* (for otherwise, EC is not enacted).

an appropriate ground or consequence of that commitment from the point of view of one set of background beliefs may not be from the point of view of another." (Brandom 2001, p. 139)

Institutional order of polynormativity will to a scholar well versed in works of the New Institutional Economics (NIE)[9] and the Institutional Analysis and Development (IAD) framework immediately be translated into a "polyinstitutional" order. The design of this order might as well follow Ostrom's polycentric governance[10] – with talk of diversity of normative communities engaging into the governing of their shared polynormative society, we can recognize a familiarity with her image of "the complex, polycentric systems of governance that are created by individuals who have considerable autonomy to engage in self-governance" (Ostrom 2005, p. 258). This text is no place to engage in serious discussion of understanding the relation between polycentric governance and the order of polynormativity. I would, however, surely admit a deep admiration for and inspiration from Ostrom's work. Furthermore, research on the institutional adaptability for remedying epistemically distortive social inequalities is surely on the agenda for anyone interested in the order of polynormativity, as is the research on cooperation in plural societies[11].

I will now list the few tentative requirements of the institutional order of polynormativity, and proceed to offer a brief and insufficient comment on each.

1) OP includes development of diverse normative communities and diverse zones of engagement.

2) OP includes development of an "ecology" of expert systems.

3) OP includes agents' epistemic suboptimality as a resource.

4) OP includes agent being able to move between normative communities.

5) OP includes declustering disadvantage.

1) OP includes development of diverse normative communities and diverse ZOE.

The case for this should have been made by now. The exact design of the institutional order sensitive to EC is, certainly, a work in progress, and to a point, if we accept that OP includes the upgrading of its own rules of the game (while maintaining EC), will always be a work in progress. For now, we could posit the basic tension between effective and adaptive mechanisms of harvesting knowledge emergent from the overlapping inferential practices of diverse normative communities and the inherent difficulty of sustainable contact (and of the sustainability of the epistemically valuable aspects of disagreement) among those

[9] New Institutionalism, the richest contemporary body of research into institutional orders of societies, is largely founded on the denial of two persistent dogmas in social science, particularly neo-classical economics (but the extent of the confusion is a matter of debate): 1) non-socialized utility maximizing agent with perfect knowledge, and 2) the institutional order of the society as reducible to the state/market dichotomy (with, in neo-classical economics, costless-transaction markets and state as an exogenous actor). For New Institutionalism, see North 1990, Hodgson 2006, Greif & Laitin 2004 and Peters 1999.

[10] See Ostrom 1990 and Ostrom 2005.

[11] Any list of the greatest contemporary philosophers of cooperation in plural societies must certainly include Gerald Gaus. See Gaus 2011 and Gaus 2013.

communities. In other words, the question is how to make those with different rules of cooperation cooperate amongst each other?

In their work "Group rewards, groups composition and information sharing: A motivated information processing perspective", Super, Li, Ishqaidef and Guthrie conclude that "(...) not only do groups need to access dispersed or specialized information they also need to effectively process that information once it is brought into the group discussion space. It is only when group members have unique knowledge sets and effectively share this knowledge can the benefits of group decision-making be realized. For optimal group outcomes, organizational conditions must be conducive to discouraging a bias towards discussing common information and instead *encourage the elicitation and discussion of unique information* – making sure that it is heard, repeated, considered, and incorporated into the group process (Brodbeck et al., 2007)" (Super et al. 2016, p. 32, my italics). On the other hand, as Ostrom notes, "If the participants in a situation come from many different cultures, speak different languages, and are distrustful of one another, the costs of devising and sustaining effective rules are substantially increased" (Ostrom 2005, p. 27). Even with trust established to a certain degree, which I would like to think of OP being able to, the difference in social normativity remains playing a difficult role of being both the source of epistemic value and an impediment for that epistemic value to emerge. I do not, however, think the situation is in any way doomed, nor that we should overstate this difficulty, even though it is a real difficulty to a large degree. The constitutional protection of pluralism, the abundance of public spaces, the freedom of speech and thought, the fights against pathological social and economic inequalities, all contribute to the development of the order of polynormativity. But more to the point – *normatively diverse people can cooperate.* Through institutional arrangement that fosters this cooperation, through exposure to one another and mutual respect and trust, normative communities can establish provisory norms and protocols of translation for dealing with one another. But also, we must adopt a more complex view of normative diversity – person belonging to a group A and a person belonging to a group B can both belong to a group C. Neighbors deliberating on the problem of their neighborhood can find a "common language" despite the differences in their "mother tongues". Problem-solving situations can be faced by holding back "the vocabulary" of a normative community while utilizing its "grammar" to develop novel ways of thinking about the problem. Muldoon reflects on this problem of "how to mitigate the burdens of increased evaluative diversity"(Muldoon 2013, p. 124) in "Diversity and the Division of Cognitive Labor", and proposes, in line with pragmatist tendency to imagine the social conceptual development as similar to a scientific endeavor, the solutions from the area of philosophy of science researching big interdisciplinary projects. Muldoon writes: "Galison (1997) developed the 'trading zone' metaphor for scientific collaborations

that involve multiple disciplines of science and engineering. In anthropology, a trading zone is where two or more communities meet to trade goods, even if they often lack a common language. Pidgins or creoles develop, enabling people to be able to trade effectively, even if they do not always understand everything that the other party would like to express. Similarly in science, Galison argues that scientists and engineers develop common symbols and scientific pidgins that enable information exchange. Given the need for successful coordination, new kinds of expertise can emerge: the ability to facilitate exchanges between disciplines becomes increasingly valuable in these kinds of environments" (Muldoon 2013, p. 124). The understanding and development of this "new kind of expertise" is one of special interest for the institutional order of polynormativity.

2) OP includes development of an "ecology" of expert systems.

This requirement is noted simply to discourage attempts to disqualify the presented argument by calling upon an image of the society lacking the emergent structures, divisions and hierarchies of epistemic labor. On the contrary, the claim by this text should extend in the following fashion: to be an epistemically superior society means to be the society that makes best decisions as to its division of epistemic labor. The argument is merely that exclusion from epistemic cooperation is detrimental to the system – it does not claim that epistemic cooperation must have the structure that denies evaluating epistemic expertize. Again, quite the contrary, it claims that the inclusive polynormative epistemic cooperation, if it is the best epistemic system, will also generate the best structure of evaluating and utilizing expertize. The epistemic system that never delegated certain (epistemic) tasks according to some (preferably epistemic) standard of reputation would not only, surely, be a dubious candidate for the best epistemic system.

However, the question becomes more complex with regards to the political decision-making, in the discussion regarding the benefits of democracy and epistocracy[12]. For the time being, we can note that neither will do by themselves. Democracy, as we noted discussing Dewey, can be hijacked, and the threat of majority tyranny looms. Aside from the constitutional protection of certain values (such as polynormativity) and the policy-making expertize, politics do include specific knowledge (at least from the standpoint of international relations), and can include making unpopular decisions. Democracy is a complex institutional order, but its two basic aspects, aggregation and deliberation, have a political and epistemic role[13]. However, it is not sufficient for the maintenance of polynormativity, as we

[12] For a sophisticated discussion of the divison of epistemic labor between experts and citizens, see Cerovac 2016.

[13] Anderson in her "The Epistemology of Democracy", following Dewey, offers particularly insightful account and analysis of the epistemic value of institutional order of democracy. It has a particular resonance with our current concerns because it gives significant epistemic import to

have seen. On the other hand, epistocracy, in its most elemental sense of experts governing, without democratic accountability, is a tyranny in which "the oligarchs have no incentive to inform themselves about the larger, changing cognitive diversity of the larger group" (Landemore 2012b, p. 264). Now, one might argue that there might be an epistocratic regime sensitive to EC and polynormativity, and their epistemic benefits. After all, if they are epistocrats, and if EC and polynormativity are features of the best epistemic social system, this should surely be the case. The question then is – which institutional order (and therefore, a mechanism) would our wise epistocrats choose to harvest and accelerate polynormativity and EC? I believe their institutional order would include a significant amount of practices similar to or same as relevant aspects of democratic politics. If this is so, then the dichotomy is somewhat void. The institutional order of polynormativity includes expert systems, presumably even political expert systems, but retains the epistemic value of the technology of democracy, as well as the deep and strong commitment to Epistemic Contribution, universal inclusion, and to the unlikely belief-reviser.

3) OP includes agents' epistemic suboptimality as a resource.

In this text I claim that the population has the greatest chance of epistemic optimality if it allows all agents into the epistemic cooperation. This reduces the possibilities of false belief reigning simply because it increases the chances of a belief-revision – of this belief being recognized as false. In this particular story, agents' epistemic suboptimality is a given in all epistemic systems, but inclusive polynormative system allows for the greatest chance of an act of epistemic suboptimality *to be used* to recalibrate the distributed normative commitments. Bad bets have value for OP, while being stuck at an suboptimal equilibrium is less likely in the order of polynormativity then in any other social epistemic system.

universal inclusion and its relation to dissent after a certain decision has been made (in contrast to epistemic democrats' usual focus on decision-making), and thus of something akin to universal inclusion as instrumental for public belief-revision (Anderson 2006). For instance, Anderson writes: "Ideally, we would want the political order to be so structured as to include methods of self-correction, so that it can steadily increase its epistemic powers. This is the point of the Deweyan model of democracy as an embodiment of scientifi c method. Just as the solution to scientific problems is to do more science, 'the cure for the ailments of democracy is more democracy' (Dewey 1981c, 327). For democracy, like science, embodies the two practices crucial to self-correction: dissent and experimentation" (Anderson 2006, p. 19). It should be noted also that Anderson would probably object to the way I have framed the debate at the beginning concerning the primacy of diversity over democracy by insisting that democracy neccessarily includes diversity (for epistemic reasons, as well), and that the institutional order that fails to do so cannot be considered to be the institutional order of democracy. I am prone to agree, actually; but I will retain for the purposes of this text the distinction whereby democracy can result in an anti-democratic system (and an anti-EC and anti-polynormative system, which is our chief concern here) if it is not protected by other means aside from majority (or ever supermajority) rule and public deliberation.

But there is a more distinct story to be told with regards to epistemic suboptimality. Kitcher has shown that behavior rational at the community level when observed at an individual level may appear irrational (Kitcher 1990). For instance, not being sensitive to a certain evidence X can be seen as epistemically suboptimal. But, if we think polynormatively, this is precisely what a normative community means. *Normative diversity means being differently sensitive (or susceptible) to evidence* – otherwise, the epistemic value of normative diversity would come into question. Zollman's work on network epistemology (Zollman 2010) further clarifies this point. Using agent-based modeling, Zollman shows that in a highly connected network it is preferable agents have extreme priors. This guards against high sensitivity to input from network connection, which essentially means that if you don't exhibit certain amount of dogmatism you will simply change your mind with every new information that comes your way to the point of *being unable to form a system of normative commitments at all*. Thus, polynormative system should be the one of extreme priors and high connectivity.

An assumption, already alluded to, must be explicated here – namely that I treat general human society as somehow similar to a scientific community (Zollman and Kitcher both talk of scientific communities exclusively, and the present subsumation of human society under epistemic habits of scientific communities is wholly my fault). In my defense, a) it is in the tradition of pragmatism to think so; b) nothing in these analyses seems to me to be controversial when applied to general human society; c) when we talk of epistemic life of human societies, we necessarily talk about a behavior that could be marked scientific in the widest sense of being sensitive to changing one's mind about X when presented with a sufficient evidence that not-X. When it comes to normative cooperation, we must also note its epistemic character – the search for the best arrangement of our inclusive plural society is at least partially an epistemic endeavor. While a number of considerations of this best arrangement could be regarded as non-epistemic, we can still treat the solution to the problem of this best arrangement as an instance of knowledge[14].

4) OP includes agent being able to move between normative communities.

Now, this point is wholly prescriptive. Normative communities cannot bar exit to their members. This much is mostly clear[15]. Individual autonomy overrides

[14] Hayek would probably object to the notion of us being able to treat an optimal system of social epistemic cooperation as an object of knowledge. However, we need not go that far. Each inference that *contributes to* that system, without neccessarily being capable of conceptualizing the whole of the system, can be an instance of knowledge, or at least of the best belief-revision available (if this is the only attainable epistemic ambition).

[15] For an overview and critical reflection on the right to exit in contemporary political philosophy, see Fagan 2006.

community rules when it comes to the individual's choice of abandoning a certain normative life.

The discretion of managing entrance, however, is a more difficult matter. Universal inclusion on the level of the population does not entail (universal) inclusion at the level of a community, it entails cooperative effort and peaceful coexistence with those outside of the community[16]. This means the group can deny its member's EC (due to, for instance, some hierarchical issue) – however, it must preserve its member's *ability to EC* if at any point the member decides to exit the community.

Cases of group autonomy with regards to barring entrance are varied. In the most banal example, if I want a band with only saxophone and drums, the person with viola cannot be a member of my band – these are the groups which have a definitive set of roles. Then there are xenophobic groups, whose right to xenophobia could be (and maybe, should be) challenged, but can hardly be denied without consultation. And then there is the situation in which a member of the group has a lower chance of changing the group norms, where the group can be afforded discretion of throwing the member out unless she complies with the group's normative commitments. This is in effect barring the entrance.

The problem of moving between groups is hardly exhausted by this feeble overview of some issues with free entrance. However, we might conclude that without some level of such autonomy on the questions of entrance, the communities will not be able to develop their idiosyncratic normativities, and therefore, the epistemic value of polynormativity will be threatened. When problems with entrance arise, however, some public deliberation is surely in order – the result might be either that group's autonomy is fully respected or that groups has to adapt to new circumstances. Within the cooperative ethos of polynormativity, the arguments will, hopefully, show us the way.

5) OP includes declustering disadvantage.

"Declustering disadvantage" (Wolff & de-Shalit 2007) is an innovative failure-first approach to egalitarian politics developed by Wolff and de-Shalit. Instead of thinking of egalitarian politics in the way of making blanket equality policies which are too formal to be substantive, imply deeply problematic intrusions into personal life or whose currency of equality is merely throwing money at the problem, the issue of equality must be addressed by scanning the social world for *specific* inequalities, and particularly "corrosive clusters of disadvantage". Corrosive clusters of disadvantage are configurations of social reality in which a certain disadvantage entails other

[16] Equally, normative communities should be able to deny the right to EC to their members *within* their community (this is a part of their normative discretion), but they shouldn't be able to deny them right to EC *outside* of their communities.

disadvantages, making the individual less likely to 'solve' the disadvantage, if 'solving' it was even an option. For instance, "(...) many researchers have found that children who are hungry cannot study properly and their results are much inferior to satisfied children" (Wolff & de-Shalit 2007, p. 127). This is, obviously, only an illustration. The clusters are varied and complex, and we will not delve into detailed structural analysis of them presently.

I merely wish to make clear that declustering disadvantages is a top priority for any polynormative order – disadvantages deny the possibility for Epistemic Contribution. The deep inequality, political, *social* and economic, is detrimental to the epistemic cooperation, and distortive with regards the epistemic signaling. On the other hand, EC and OP are theoretically very favorably positioned to remedy corrosive disadvantage. If we take each citizen as a knowledge giver[17] (a belief-reviser), we will structure her environment[18] for her to be capable of giving us knowledge.

Declustering disadvantages calls for an institutional order that can recognize and efficiently and *appropriately* (March & Olsen 2016) remedy clusters of disadvantage, both when they become corrosive and, preferably, before they do.

The policy recommendations with regards to the declustering disadvantage is beyond the scope of this text. However, enormous great work on policy design from both NIE and IAD is certainly a recommended starting point for further research.

CONCLUSION

Human society is, among other things, a mechanism for the distribution of belief-revision. Revision of a false belief is fundamental to a mind dealing with the environment. However, after a certain threshold of development, to change one's mind is not something humans are very keen on doing. If we want to design the best social epistemic system, this "inertia" will be relevant, and will entail that the

[17] Both Fricker and Wolff and de-Shalit equally stress the notion of "giving" as a seriously disregarded aspect of Capabilities. Fricker notes: "If the familiar figure at the centre of liberal conceptions of well-being is a receiver of goods, then Wolff and De-Shalit present us with the implied but forgotten counterpart—someone who enjoys the esteem that comes with the capability to give in the broad context of social reciprocity" (Fricker 2015, p. 75).

[18] An issue could be raised here: what if certain normative communities (for instance, those that deny their members to epistemically contribute within the community) object to the qualified eqalitarianism required by OP, and wish to abstain from having their members' disadvantages declustered? If we, for our present purposes, aside the political and moral concerns with such communities, and answers that could be given to them derived those disciplines, from *strictly* OP point of view the disadvantages that threaten the capability to epistemically contribute outside of the community and in the future, when the member may choose to exit, must be remedied. This means health and an access to a certain variety of ZOE (particularly public schools) must be protected.

cooperation of many different minds using many different normative strategies is more likely to deliver a particular belief-revision. This understanding leads to, what I believe is, a strong system-level case for universal inclusion (understood through Fricker's Epistemic Contribution) as the carrier of epistemic diversity comprising both cognitive and normative diversity. This in turn implies the institutional order responsive to EC (and particularly its instrumental epistemic aspect) is the one of polynormativity. If we fail to develop such an institutional order, we have failed to do what is in our best interest.

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