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Joint Epistemic Action: Some Applications

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ABSTRACT *The notion of a joint action is a familiar one in the philosophical literature. Moreover, the notion of epistemic action has recently been discussed in the literature. Elsewhere I have suggested that these two notions can be brought together to yield the notion of joint epistemic action and provided a relational individualist analysis of joint epistemic actions. In this article I extend this analysis and show how this extended analysis applies to different kinds of important epistemic institutional phenomena: (1) voting in a democracy; (2) financial benchmarks, e.g. LIBOR (the London interbank offered (interest) rate) and; (3) profiling using computer databases. Each of these institutional mechanisms is important in its own right. Moreover, each is a species of a more widespread generic social form that I refer to as joint institutional mechanisms which, I suggest, are ubiquitous yet somewhat diverse in character. Accordingly, there is a need to distinguish them from the more basic phenomenon of joint action but also to taxonomise them. The latter is a large task to which this article is a first step.*

The notion of joint action is a familiar one in the philosophical literature.[1] An example of a joint action is two people lifting a table. Moreover, the notion of epistemic action has recently been discussed in the literature.[2] Roughly speaking, epistemic actions are actions directed to an epistemic end, such as knowledge. An example of an epistemic action is a person working out the answer to a crossword puzzle. Elsewhere I have suggested that these two notions can be brought together to yield the notion of joint epistemic action and I have provided a relational individualist analysis of joint epistemic actions.[3] An example of a joint epistemic action is two persons jointly working out the solution to a crossword puzzle.

In this article I extend this relational individualist analysis of joint epistemic action and show how this extended analysis applies to different kinds of important epistemic institutional phenomena. I apply my analysis to:[4] (1) voting in a democracy; (2) financial benchmarks, e.g. LIBOR (the London interbank offered (interest) rate) and; (3) profiling using computer databases (ICT (information and communication technology) profiling). Each of these institutional mechanisms is important in its own right. Moreover, each is a species of a more widespread generic social form, namely, what I refer to as joint institutional mechanisms. Joint institutional mechanisms are, I suggest, ubiquitous yet somewhat diverse in character. Accordingly, there is a need not only to distinguish them from the more basic phenomenon of joint action but also to taxonomise them. The latter is a large task to which this article is a first step.

Assuming that joint institutional mechanisms are both ubiquitous and central to political, economic and social life, and that my relational individualist analysis of these

three diverse examples of such mechanisms is correct, there are a number of important implications for social ontology. First, the main collectivist challenge to individualist analyses of such phenomena has been met since that challenge typically consists in presenting voting mechanisms and the like as resistant to individualist analysis.[5] Second, it is likely that collectivist analyses of these phenomena are not necessary and therefore, by Occam's razor, should be abandoned. Third, it provides evidence in favour of individualism (albeit relational individualism) over collectivism as a theoretical standpoint in respect of social forms, more generally. After all, these institutional mechanisms are touted as being among the most resistant to individualist analysis.

Voting is obviously a central practice in the election of governments in democratic nation-states, but it is also used in many, perhaps most, organisations. Financial benchmarks are critical to the functioning of national and global financial markets, but the use of benchmarks is also widespread in many other sectors, e.g. organisational economic performance measurement. Profiling using computer databases is now widespread in criminal justice contexts and in marketing. Indeed, with the advent of so-called 'Big Data' it is becoming not only more reliable but ubiquitous.[6] There is a theoretical reason for selecting these three epistemic institutional phenomena; that is, a reason aside from the utility attached to the ability to generalise the analyses of these three to other like social forms. For each of the three is importantly different from the other two either in respect of their epistemic character and/or their cooperative character and/or their normative character. Consider, for example, voting systems. As argued below, unlike financial benchmarks and computer-based profiling, voting systems are governed by a performative convention. This has the consequence that voting systems, unlike the two others, are relatively impure or qualified *qua epistemic* phenomena.

The epistemic, cooperative and normative character of these three institutional phenomena, and the differences in these respects between the three, have important practical implications. For example, if LIBOR and other financial benchmarks are joint institutional mechanisms then at the heart of competitive financial markets there are cooperative schemes upon which all relevant market actors rely: in essence, benchmarks, such as LIBOR, constitute critical financial infrastructure. Therefore, manipulation of LIBOR should not be regarded merely as yet another instance of one or more market actors defrauding some other market actor(s), but rather as a form of institutional corruption with the potential to seriously undermine financial markets as such.

In the final section of the article I consider a collectivist objection to my analysis of such joint epistemic institutional mechanisms (as I call them). This objection turns on the adequacy of my analysis in the face of apparent inconsistencies between individual intentions or judgments (inputs to some institutional mechanism) and the results delivered by the mechanism (outputs of the mechanism). For example, a tenure committee might be committed to an institutional mechanism for aggregating their individual judgments in respect of a particular candidate (inputs) which delivers a result (output) which is apparently inconsistent with each of these individual judgements (the inputs).[7]

Joint epistemic actions involve two or more persons jointly pursuing a common or collective goal or end.[8] Consider, for example, a team of detectives working on a murder case. In such cases each participant intentionally does his or her epistemic part, e.g. a forensics officer whose task is to determine the identity of the person whose

blood is on the victim, and each has the same ultimate epistemic end, e.g. to determine the identity of the murderer. Moreover, there is interdependence among the epistemic actions of each; each believes (or at least hopes) that the others will do their parts and, indeed, relies on at least some of the others to do their part if the shared end is to be realised. Further, there is typically interdependence with respect to the possession of the epistemic end. Since no single participant could realise the ultimate end on their own (or could only do so with difficulty) each only has the end if the others do. Finally, it is a matter of mutual true belief[9] among participants that each has the (interdependent) end and beliefs in question.

There are a number of points to notice about joint epistemic action on this account. First, while each participant has beliefs with respect to the actions of other participants, no participant *necessarily* has any intentions with respect to the actions of others.[10] Rather each only necessarily has intentions with respect to their own actions. That said, such intentions with respect to the actions of others *might* be present in some cases, such as those involving authority relations between participants. A superior might issue a direct order to a subordinate to do their part in some joint epistemic action and in issuing the order also intend that the subordinate perform the act in question.

Second, joint epistemic action typically involves mental acts,[11] such as judgments,[12] and behavioural actions, such as communicating and physical evidence gathering. I am assuming that what makes an action an epistemic action is that its goal or end is epistemic and that this point applies both to individual and joint epistemic actions.

Third, there are multiple varieties of joint action.[13] For example, in some joint actions the commitment of the participants to the collective end is strong, in others it is weak; and in some cases the participants strongly believe that others will do their part, in others they merely hope that they will do so.[14] There are also multiple forms of cooperative activity which are closely related to what I am referring to as joint action but which are, nevertheless, not joint action, properly speaking. For example, cooperative action in which one agent, X, with some end E, is assisted by another agent, Y, but Y does not actually have end E and may not even be aware that X has end E.[15]

Fourth, this is an individualist, albeit a relational individualist, account of joint action. Each participating agent has intentions with respect to their own actions and beliefs with respect to the actions of the other participating agents. However, they also have a shared end which is realised by each intentionally performing their own individual action. Crucially, this shared or *collective*[16] end which the participating agents have is a construction out of their individual ends.[17] Specifically, a set of agents have a collective end if each participating agent in a joint action has an individual end which is realised by the numerically same state of affairs as realises the individual end of each of the other participating agents; and there is, as already mentioned, interdependence with respect to these individual ends. Accordingly, there is no recourse to *sui generis* we-intentions of the kind espoused by John Searle, Raimo Tuomela or Margaret Gilbert.[18] Moreover, my analysis of joint epistemic institutional mechanisms is likewise an individualist relational account. Armed with this basic account of joint epistemic action let me now seek to extend it in order to make it serviceable for application to our three examples of institutional phenomena.

Joint Epistemic Institutional Mechanisms and Voting

Elsewhere I have introduced and analysed the notion of a joint mechanism.[19] An example of the use of a joint mechanism is two friends tossing a coin to resolve a dispute as a one-off action. Some such mechanisms are institutionalized, e.g. the practice of tossing a coin to decide who is to bat first in an international game of cricket between England and Australia. Let us refer to these as joint *institutional* mechanisms.

I now offer an analysis of joint institutional mechanisms taking the institutional practice of voting in a representative democracy as our example.[20] Joint institutional mechanisms consist of: (a) a complex of differentiated, but interlocking, intentional actions (the input to the mechanism); (b) the result of the performance of those actions (the output of the mechanism), and; (c) the mechanism itself. Here the mechanism itself is to be understood as consisting of an operation on the inputs that yields an output; so strictly speaking inputs and outputs are constituents of the mechanism only in the sense of being placeholders or variables. Thus, the notion of a joint mechanism does not collapse into the notion of a joint action. For in the case of a joint action, as we saw above, the individual actions are not inputs upon which an operation is performed; rather they are simply actions directed at a collective end and, as such, are constitutive of the joint action. Accordingly, while joint actions are individuated by their constitutive individual actions, joint mechanisms are individuated by their various operations. Thus, it would be a different joint action (albeit one realising the same collective end) if the participants had lifted the log blocking the pathway rather than pushing it aside. However, it would have been the same joint mechanism if voters x, y etc. had voted for Smith rather than Jones. On the other hand, if the voters voted for exactly the same candidates, but the voting mechanism had been proportional rather than (say) first past the post, then it would have been a different joint mechanism. Importantly, unlike mere joint actions, joint mechanisms enable the production of outputs that *qua* results are not necessarily aimed at, as we will see below.

Let us consider the joint institutional mechanism of voting, and do so on the assumption that in representative democracies, at least, the institutional mechanism of voting (whether in a preferential, proportional etc. form) is a critical component of the political infrastructure. Accordingly, electoral fraud is rightly regarded as a profoundly corrupt activity which potentially undermines democratic governance. Citizen A votes in an election and A does so only if others, B, C, D etc. also vote, and only if there is someone to vote for. So in addition to the actions of voting there are the actions of the candidates, X, Y, Z etc., in standing for political office. That they stand as candidates is (in part) constitutive of the input to the voting mechanism; after all, voters vote *for candidates*. So there is interlocking and differentiated actions (the inputs). Further, there is some result of the operation of the mechanism: some candidate, say, Smith is voted in by virtue of having secured the most votes (the output). What of the mechanism itself? A key constitutive feature of this voting mechanism is as follows: to receive the most number of votes *is* to win the election.[21] Importantly, that Smith, in particular, is voted in is not something aimed at by all of the participants; specifically, those who voted for Jones were (obviously) not aiming at getting Smith elected!

How does joint action figure in this, given that voters who voted for Jones were not participants in the joint action to vote in Smith? Each voter, of course, performs an intentional individual action of voting and believes others are doing likewise. However,

being a species of joint action there must be, on my analysis, a collective end which *all* the voters have. Here we need to be careful. Naturally, it is not an end of *all* the voters (and, therefore, not a collective end of all the voters) that Smith is voted in; for a number of voters voted for other candidates, such as Jones. Rather it is only a collective end of those who vote for Smith that he be voted in; each member of this sub-group of voters votes for Smith in the belief (or, at least, hope) that others will also vote for Smith. Since we are assuming Smith did in fact receive the most votes it follows that those who voted for him have realised the collective end of their joint action. Likewise it is a collective end of those who voted for Jones that she be voted in. However, since Jones did not receive sufficient votes to win the election theirs is an unsuccessful joint action. So at the level of sub-groups of voters there may be multiple joint actions, only one of which is successful.

Importantly, there is also a collective end of *all* the voters and *all* the candidates (or at least all those voting and standing for election in good faith). This is the collective end that the one who gets the most votes – whoever that happens to be – is the winner. This is a collective end of all *bona fide* participants in the joint institutional mechanism and reflects the commitment of the participants to the above-mentioned key constitutive feature of the mechanism, i.e. that the candidate with the most votes wins the election. Accordingly, participants in this joint institutional mechanism perform the individual actions of casting a vote and/or standing as a candidate having as a collective end that the one who gets the most votes – whoever that is – wins the election. So voting is a species of joint action and, more specifically, a joint institutional mechanism.

There is, however, a further important feature of this joint institutional mechanism; indeed, a feature which is arguably its *raison d'être*. The one who gets the most votes is not simply the winner of the election. For that person is also, by virtue of winning the election, the institutionally and morally legitimate occupant of the political office in question and is or, at least, ought to be jointly accepted as such.[22] I take it that enabling the provision of legitimate occupants of political offices is a fundamental institutional purpose of voting systems in democracies and that legitimate political authority is, in some sense, a collective good (of which more below). Moreover, if the winner of the election is not jointly accepted as the legitimate occupant of the political office then that person may cease to be the legitimate occupant, notwithstanding their electoral win. Seemingly, this is exactly what has recently happened in Thailand and what has led to the military coup in that country.[23]

Accordingly, concomitant with political rights, such as the right to vote and hold political office, there are political obligations. These include the obligation to accept the results of legitimate political processes, to obey the lawful directives of duly elected leaders, and to comply with the laws enacted by the duly elected legislature.

These two normative dimensions of political participation, i.e. rights and obligations, go hand in glove and are given institutional expression in the joint institutional mechanism of voting. Firstly, each has a *moral right* to vote and, in the light of our analysis of the voting mechanism as a *joint* mechanism, this is a *joint institutional and moral right*. As such, it is a right possessed by each interdependently with the others in the service of a collective end which is also a collective good or, at least, a telescoped set of collective goods, namely, political participation (first collective good) in the provision of a legitimate government (second collective good). Secondly, the one who gets

the most votes is not simply the winner of the election. For that person is also, by virtue of winning the election, the morally and institutionally legitimate occupant of the political office in question. Indeed, there is a *joint institutional and moral obligation* on the part of all voters – irrespective of which candidate each might have voted for – to accept the election result and, thereby, confirm this legitimacy.[24] So the obligation to accept the result is a moral obligation possessed by each interdependently with the others in the service of a collective end which is also a collective good, or, at least, telescoped set of collective goods, namely (and as is the case with the closely related joint rights), political participation in the provision of a legitimate government.

Moreover, this notion of joint acceptance of properly elected political office-holders is to be understood as a performative convention.[25] Roughly speaking, a performative convention is a convention having the following form: Doing x counts by convention as doing y, e.g. the bride and groom saying 'I do' counts as getting married (in the right circumstances, in front of the right person and so on).[26] There is evidently a performative convention (typically enshrined in law) to the effect that the candidate with the most votes in the election *is* the legitimate occupant of the political office in question. Compliance with this convention consists in treating the candidate with the most votes as the legitimate occupant of the office, e.g. by complying with their policies or with legislation that they might introduce. Moreover, widespread compliance with this convention brings it about that the winner of the election is in fact the legitimate occupant of the office; this is the performative aspect of the convention. Accordingly, if Smith received the most votes in the election then *by convention*[27] Smith is *in fact* the legitimate occupant of the office – assuming the electoral process was not flawed, Smith meets the requisite eligibility criteria, the induction procedures have been conducted, and so on. So this performative convention is an additional element of the voting mechanism.

To be sure, conventions are not necessarily followed; indeed, some people regularly flout conventions. However, the point to be stressed here is that if enough people on enough occasions flout a convention then that convention will simply cease to exist (or at least be moribund and, as such, non-binding). The performative convention governing the joint institutional mechanism is no exception. If some voters simply refuse to accept Smith as the legitimate occupant of the office in question, notwithstanding that he won the election then the performative convention has been flouted by these votes. If enough voters refuse to accept the winners of elections as the legitimate office holders, and do so on enough occasions, then the performative convention will lose its binding force and eventually go out of existence.

This conception of the voting mechanism – as a joint institutional mechanism in part constitutive of the political infrastructure of representative governments – displays the inherently cooperative and normative character of voting: voting involves the exercise of a joint right, and the discharging of joint obligations, in the service of collective goods. It also reveals why electoral fraud is, or ought to be, a serious crime. Electoral fraud compromises the results of this joint institutional mechanism and, as such, undermines the collective good generated by it, namely, legitimate political authority. Hence electoral fraud is profoundly corruptive of the political infrastructure of representative democracies.

Thus far I have presented the voting mechanism as a species of joint action, but not of joint *epistemic* action. However, arguably to vote is to exercise one's judgment and,

therefore, the voting mechanism is a species of joint epistemic action. This is consistent with the intuition that voting one is, among other things,[28] communicating one's judgement (albeit anonymously). Moreover, the result of the election is determined on the basis of these votes. Certainly, the votes (communicated judgments) are aggregated in accordance with the procedure that the person who gets the most votes is the winner. The proposition that voting is an epistemic procedure is based in large part on the view that voting has or, at least, ought to have as a central purpose (collective end, in my parlance) to determine the best person to hold the office in question, where the best person is (say) the person most likely to do what is best for the community as a whole.[29] Accordingly, voters are under a moral obligation to make informed, rational judgements and do so, in large part, having as an end the collective good. The moral right to vote is not merely the right to perform the formal act of casting one's vote and doing so, for example, flippantly or unthinkingly.

On the other hand, even if this is correct, as I think it probably is, voting someone into office is not a case of *mere* joint epistemic action; the existence of the above-described performative convention which brings about a non-epistemic state of affairs (that of being an office-holder) is sufficient to show this. Accordingly, I conclude that such a voting system is a qualified or impure kind of joint epistemic institutional mechanism and casting a vote is a qualified epistemic activity.[30] Let me now turn to the application of this individualist joint action analysis of joint institutional mechanisms to my other two examples.

Financial Benchmarks

Financial benchmarks are reference rates used by market actors, notably in global financial markets.[31] They include interest reference rates such as LIBOR and Forex reference rates, such as the US dollar/euro exchange reference rate. LIBOR is calculated for major currencies, administered by NYSE-Euronext and published daily. The LIBOR is the average short-term (e.g. daily [shortest term], yearly [longest term]) interest rate that leading international banks estimate they would have to pay if borrowing from other banks. The most important LIBOR is the three-month interest rate for US dollars. The average interest rate calculations are based on submissions to the administrator by the leading banks in question. These submissions ought to be the *bona fide* estimations by the leading banks of the interest rates they would have to pay, not the least because there is much at stake here. According to Martin Wheatley (of the Wheatley Review of Libor[32]) 'Libor is used in a vast number of financial transactions; with a value of at least $300 trillion'.[33] I note that these estimations, not being calculations derived from actual observed transactions, are inherently subjective and, as such, lend themselves to 'falsification'. In fact there has been ongoing manipulation of LIBOR and other financial benchmarks leading to billions of dollars of fines being levied against global banks.[34]

As we saw above, joint institutional mechanisms consist of: (a) a complex of differentiated but interlocking actions (the input to the mechanism); (b) the result of the performance of those actions (the output of the mechanism); and (c) the mechanism itself. In the case of LIBOR the inputs are the interest rate estimates submitted by the banks. So there is interlocking and differentiated action (the various inputs of the

submitters). Further there is the process applied to the inputs (the mechanism). In the case of LIBOR this mechanism consists in averaging the various submissions.[35] The application of the mechanism (the averaging process) to the input (the submissions) yields an output, namely, the LIBOR interest rate for some currency over some period.

Note the following important points regarding these joint institutional mechanisms, assuming they are working as they should and realising their institutional purposes, i.e. if they are not malfunctioning or corrupted. Firstly, the actual result, (i.e. the resulting numerical interest rate or foreign exchange reference rate etc.), is not aimed at by each or any of the economic actors providing the data; after all, none of these actors can predict the result, let alone bring it about by aiming at it. Nevertheless, in the case of LIBOR, each of the participants in the mechanism (e.g. the bank submitters) has as an (interdependent) end that the average interest rate – whatever that is – will be produced by this mechanism. It is this end that explains and, for that matter, justifies their individual actions.

Importantly, for our purposes here, this collective end is an epistemic end; the end is to generate an item of knowledge, namely, the average interest rate. So financial benchmarks are, at least to this extent, a species of joint epistemic institutional mechanism.

Here I note that the agents can have a collective end notwithstanding that they do not know the precise content of that end. In fact this is almost always the case with joint epistemic actions in general, and with joint epistemic institutional mechanisms in particular. For the whole point of epistemic action, joint or otherwise, is to come to know something; to replace ignorance with knowledge, so to speak. Thus, to return to an earlier example, the collective end of the detectives undertaking the murder investigation is to determine the identity of the murderer. So the content of their collective end, 'That ..... is the murderer' is necessarily unspecified in a critical respect.

There is a further important point to be made here. As we saw in the case of the voting mechanism, the generation of an interest rate reference rate by such a mechanism serves a further institutional purpose which is the *raison d'être* of the mechanism (and, as such, in part constitutive of it), namely, that of providing a *benchmark* (interest rate, foreign exchange reference rate etc.) upon which various institutions and individuals can rely. So at one level of description the result of the application of, for example, the LIBOR mechanism is simply a particular interest rate arrived at by the process of averaging, i.e. it is just a *number*, say, 3%; but at another level of description this interest rate is a *benchmark*.

This ultimate benchmarking purpose is itself a collective end of the joint institutional mechanism, but one aimed at not just by the bankers (in the case of LIBOR, the submitters and the compilers of the rates), but also by those who use LIBOR to set their own interest rates or enter into contracts based on LIBOR. That LIBOR serves as a benchmark is an end which is realised not simply by the banks generating it via their submissions, but also by other institutions and individuals using it as such. Absent the participation of both parties (or categories of party), the financial benchmarks of LIBOR reference rates would have no point and would cease to exist.

Notwithstanding that *qua* benchmarks the financial reference rates in question are used by market actors in contracts, in setting their own interest rates, and so on, they remain essentially epistemic phenomena. They do so since they are used as items of

knowledge (or of information or some such) by market actors. Moreover, insofar as they are not regarded as items of knowledge then they will be ignored. In this respect they differ from the election of candidates to political offices; the latter cannot simply be ignored to the same extent or in the same way.[36] So financial benchmarks are relatively pure or unqualified joint *epistemic* institutional mechanisms or, at least, they are less impure, epistemically speaking, than voting systems in democracies. Accordingly, I take myself to have provided my first clear example of a joint epistemic institutional mechanism.

I suggested above that the voting mechanism had as an important institutional purpose the provision of legitimate occupants of political offices and that this was a collective good. Indeed, the institutional purpose or collective end of all joint institutional mechanisms and, therefore, of LIBOR and other financial benchmarks is or, at least, ought to be a collective good. However, I am using 'collective good' in a particular sense of that term. Specifically, and consistent with my joint action account of these institutional mechanisms, collective goods are goods which are jointly produced.[37]

I also argued that in the case of the voting mechanism the provision of this collective good was crucially dependent on a performative convention. Financial benchmarks also have an important institutional purpose which is a collective good, albeit an economic rather than a political one. However, provision of the good in question is not dependent on a performative convention. Recall that in the case of acting in accordance with a performative convention one does what one does because it is the convention and everyone doing so creates a new state of affairs by virtue of the convention. However, in the case of acting in accordance with a benchmark one follows the benchmark reference rate not because there is a convention to do so, but rather because it is regarded as an accurate representation of (say) the median of a set of transactions. So in the case of benchmarks, but not conventions, a single market actor would use the benchmark if he believed it was an accurate representation of the median of the relevant set of financial transactions even if he, for some reason, did not believe others were using that benchmark. (Perhaps he is a naïve newcomer whose experienced colleagues are playing a joke on him by telling him that most other market actors don't use the benchmark and that, therefore, he has an advantage over them in respect of market knowledge.)

As is evident from the above, in this financial world, and in any financial world involving a huge number of financial transactions in every second of every day, financial benchmarks that summarise market transactional data are necessary if financial actors are to make rational (because knowledgeable) decisions based on the market transactions of others (e.g. based on market prices). Accordingly, (objectively based) financial benchmarks are a financial good; indeed, a public good in the economists' sense of a non-rival and non-excludable good.[38] Since the provision of objective reference rates is a good – and one produced jointly – it is something that *ought to be* jointly aimed at by relevant participants; it ought to be aimed at (other things being equal) because it is a good (albeit, in the case of benchmarks, an instrumental good). In short, financial benchmarks are not simply prices consequent upon supply and demand but which no-one is actually aiming at; rather they are the aimed-at average or median (or other numerical relationship) calculated on the basis of recorded transactional data or judgments thereof. Moreover, they are calculated, promulgated and relied upon as a collective good, i.e. as a mutually known benchmark upon which

market actors can rely. Accordingly, they constitute, I suggest, financial infrastructure underpinning market activity in the finance sector.

This conception of financial benchmarks – as joint epistemic institutional mechanisms in part constitutive of the infrastructure of national and global financial markets – displays the inherently cooperative and normative character of financial benchmarks, notwithstanding that their primary use is by competitive, (presumably) self-interested market actors. This conception also reveals the existence and source of the moral obligations of submitters and compilers to ensure that their epistemic actions are correct. These obligations derive from the fact that financial reference rates are a collective (epistemic) good upon which market actors rely, and national and global financial markets depend. It also reveals why benchmark manipulation is, or ought to be, a serious crime. Benchmark manipulation compromises the results of these joint institutional mechanisms and, as such, undermines the collective goods generated by them, namely, objectively-determined financial reference rates. Hence benchmark manipulation is profoundly corruptive of the infrastructure of national and global financial markets.

Let me now turn to my third example of a joint epistemic institutional mechanism, namely, computer data-based profiling.

ICT Profiling

Information and communication technology (ICT) enables the storage and retrieval of databases of information and the integration of such databases to constitute ever-larger databases. Indeed, the promise of so-called 'Big Data'[39] is to have more or less complete data sets in a given sector, e.g. all the call records of callers using a particular call system. Such electronic databases enables the generation of new information not envisaged by those who initially stored the information in the database, for example, by combining elements of old information. Such generation of new information on the part of a 'retriever' can be an instance of utilisation of a joint epistemic mechanism and, insofar as it is institutionalized, a joint epistemic institutional mechanism.

Consider a large database of police officers in the internal affairs department of a police organisation.[40] The database consists of employment history, crime matters reported and investigated, complaints made against police, personal financial data, known associates and so on. A large number of people, including police and administrative staff, have stored, and continue to store, information in this database in order to facilitate the institutional purpose of the internal affairs department (to identify corrupt police officers, let us assume). This is joint epistemic action. Moreover, when another police officer accesses the database for some specific item of information arguably this is also joint epistemic action. It is joint epistemic action to the extent that communication can be analysed as a species of joint epistemic action, as I argue elsewhere it can.[41] For such accessing of a database is, in effect, a communicator (those who input the data) informing an audience (the officers who access the data), except that the communicators do not necessarily know who the specific individuals in the audiences are or when they are acting as an audience. Moreover, there is no simple one-to-one relationship between a single communicator and a single audience. And there are further complications (of which more below).

Now consider a police officer engaged in an anti-corruption profiling task (Officer O'Rourke). He first appropriates the department's profile of a corrupt police officer, for example, an officer who has at least five years police experience, has had a large number of complaints, works in a sensitive area such as narcotics, has financial problems, associates with known criminals, and so on. This profile is itself the product of joint epistemic action, having been developed by a team of internal affairs officers, the profile of corrupt officers development team. Armed with this profile O'Rourke uses an ICT search engine to search the database for officers that fit this profile. Eventually, one police officer is identified as fitting the profile, Officer O'Malley. This profiling process is the operation of a joint epistemic mechanism. First, it relies on the differentiated, but interlocking, epistemic actions of a number of agents, including those who initially stored the old information from which the new information is derived, and the internal affairs officer who inserted the profile into the search engine. Moreover, this profiling process is repeatable and repeated; for example, different profiles can be and are searched for. Second, the new information, namely that O'Malley fits the profile, is the result; it is derived by means of the profiling mechanism from the inputs of the profile in conjunction with the stored data. However, that O'Malley fits a certain profile is not in itself part of the profiling mechanism *per se*. Third, there is the profiling mechanism itself and its fundamental institutional purpose, namely, to identify police officers who are likely to be corrupt or, at least, are worthy of further scrutiny.

The result of the use of the profiling mechanism is akin to the result of the use of a voting system and to the result of the financial benchmark systems discussed above. As with the voting and the benchmark cases, at one level of description identifying O'Malley was a goal or end of O'Rourke, as it was of the members of the profile development team; that is, O'Rourke and the members of the team had as a shared (interdependent) end (collective end) that the person(s) who fits the profile be identified. (As it was an end of all the voters in the voting example that the person with the most votes – whoever that is – wins the election or (in the financial benchmark example) that the average interest rate – whatever that is – will be produced by the benchmark mechanism.) At another level of description this was not an end; that is, it was not a goal or end of O'Rourke or of the members of the profile development team that O'Malley fit the profile. For it is a large police organisation and neither O'Rourke, nor any member of the team, knows of O'Malley's existence, let alone knows that he would fit the profile. (As it was not an end of all the voters that Smith win the election or of all the LIBOR submitters that the interest reference rate be, say, 3%.)

Notwithstanding that such corruption profiles can ultimately lead to behavioural action such as the incarceration of those identified, the profiles themselves and who fits them remain essentially epistemic phenomena. So the ICT profiling system is akin to financial benchmarks and somewhat unlike the voting system; it is a relatively pure or unqualified kind of joint *epistemic* institutional mechanism. It is also similar to financial benchmarks and dissimilar to voting systems in democracies, in that it does not depend for the realisation of its central institutional purpose on a performative convention. So I take myself to have provided my second clear example of a joint epistemic institutional mechanism.

This conception of ICT profiling mechanisms as joint epistemic institutional mechanisms displays their key features and highlights a number of important practical

implications of their use. Some of these features (and implications of use) serve to differentiate ICT profiling mechanisms from voting mechanisms and/or from financial benchmarks. Let me list some of these.

First, as already noted, ICT profiling mechanisms are a relatively pure kind of joint epistemic institutional mechanism (akin to financial benchmarks, but unlike voting mechanisms.) Second, while ICT profiling systems are potentially a useful tool in the hands of law enforcement agencies, they are not critical infrastructure in part constitutive of those agencies, let alone of the criminal justice system as a whole. In this respect they are quite unlike the institutional mechanisms of voting in representative democracies and of financial benchmarks in financial markets. Third, in the case of an ICT profiling system the persons who input the data are not the source of that data and it is not necessarily data about themselves or their organisation, e.g. it might be data about O'Malley's personal finances gleaned from his bank. Fourth, and relatedly, the 'participants' in this kind of 'joint' mechanism are not all engaged in cooperative activity. Indeed, corrupt police officers stand in a very direct and unqualified adversarial relationship to the police officers who are jointly operating the ICT profiling mechanism the collective end of which is to identify corrupt officers.[42] In this respect ICT profiling systems are a qualified cooperative scheme, notwithstanding that they are joint institutional mechanisms. Fifth, again relatedly (and unlike voting or generating financial benchmarks), ICT profiling is a morally problematic activity, given that in itself it is an infringement of privacy (if not a violation of privacy rights) and that *qua epistemic tool* it is usable for evil purposes, (e.g. criminals seeking to identify 'soft' targets), as well as good ones. Sixth, and in the light of the third and fourth points above, the collective good – presumably, in the case of the example discussed above, the detection and prevention of organisational corruption – would need to be specified in a somewhat different manner from the manner of specification used in the financial benchmarks and the voting system. In the case of the ICT profiling system, what is good for some is bad for others and vice versa; indeed, the anti-corruption officers and the corrupt police officers are engaged in a zero-sum 'game'.

Let me now turn, finally, to the earlier mentioned objection to my individualist analysis of joint epistemic institutional mechanisms.

Objection: The Judgment Aggregation Paradox

As is evident from the above, my view is that joint epistemic institutional mechanisms, such as voting systems, financial benchmarks and ICT profiling systems can be analysed in wholly individualist terms. There is, I contend, no need to introduce collectivist notions such as *sui generis* we-intentions, irreducibly collective reasoning and the like. However, there is an influential argument in the literature which, if sound, would have the consequence that this individualist project cannot get off the ground.[43] This argument depends heavily on various examples, e.g. the tenure committee, in which the claim is that groups make reasoned decisions, yet none of the individual members of these groups has individually made these decisions on the basis of a process of individual reasoning. Accordingly, we apparently have processes of irreducibly *collective* reasoning, and therefore must acknowledge the existence of irreducibly collective intentions and judgments, and indeed, irreducibly collective minds and irreducibly

collective responsibility. As I have dealt with this argument in detail elsewhere,[44] I will content myself here with a relatively brief response and do so in the light of the above adumbrated analysis of joint epistemic institutional mechanisms. The key move in my response is to view these examples as instances of joint epistemic institutional mechanisms and, in particular, to invoke my notion of a collective end, bearing in mind that collective ends are constructions out of individual ends. Let me first briefly outline the tenure committee example.

Assume that there is a university tenure committee consisting of three persons, A, B, and C, and that it has to determine whether or not a candidate, Borderline, should be granted tenure. The university's standard for tenure is excellence in each of the three areas of research, teaching, and service. The university's procedure (P1 – a so-called conclusion-driven procedure) for determining whether this standard has been met is for each member of the committee to vote on whether she believes the candidate is excellent in all three areas; if there is a majority in favour then tenure is granted, if not then it is denied. However, in this instance, A, B and C each believe there are only two areas in which Borderline is excellent; so each votes to deny tenure and, consequently, the university denies tenure. The twist is that with respect to each area, e.g. research, a majority believes Borderline is excellent. Accordingly, if the procedure had been to vote on each area (P2 – a so-called premise-driven procedure) then Borderline would have been deemed to be excellent in all three areas and would have been granted tenure. Let us assume that P2 is a good procedure for ensuring the university's standard for tenure is met and that P1 is flawed.

By my lights both P1 and P2 are joint epistemic institutional mechanisms, both of which have as their constitutive collective end to determine whether or not any given candidate is worthy of tenure. Moreover, we need to keep in mind that as with all joint actions, each member of the committee intentionally performs an individual judgment or action but in doing so is also aiming at the collective end of the mechanism. Moreover, if the procedure, PI, is flawed or otherwise delivers an incorrect (and, therefore, possibly unjust) result then the members of the committee may well be jointly implicated; after all, they jointly deployed the procedure.[45]

This and like examples illustrate that groups engaged in decision making can adopt different ways of doing things, and when they do so the result can diverge radically. Of course none of this is new. However, the conclusion that collectivists want to draw from such examples is new. For they claim that the choice between P2 (the premise-driven way) and P1 (the conclusion driven way) is a dilemma between submitting to *individual* reason and submitting to *collective* reason.

However, this example, and by implication all similar examples, do not manifest this alleged new phenomenon of collective reason; and nor, therefore, does the example compel us to accept the existence of irreducibly collective subjects that make judgments and form beliefs, and can be ascribed collective responsibility.

Irrespective of whether the dilemma is resolved in the premise driven way or the conclusion driven way, the example manifests only two processes. The first process is that of voting. If recourse is had to the conclusion driven way, there is a vote on the conclusion; if recourse is had to the premise driven way there is a vote on each of the premises. But the process of voting simply involves two sorts of individual end. Each academic votes having as an individual end that their favoured candidate is voted in; but, as was argued above, each also votes having as a collective end i.e. a shared, interdependent

individual end, that the one with the most votes – whoever that is – is voted in. Importantly, it is consistent with this collective end that the person voted in might not be the preferred candidate of any of the voters. I conclude that the voting process does not entail the existence of irreducibly collective mental states or reasoning.

The second process is individually reasoning from a set of premises to a conclusion. Assuming that the conclusion follows from the premises as a matter of logic, and that the members of the committee are logically competent, then each will individually derive the conclusion from the premises, and do so irrespective of whether the premise driven way or the conclusion driven way is being used. Of course in the case of the premise driven way, the premises from which each academic will *individually* infer the conclusion are premises determined by voting, whereas in the case of the conclusion driven way the conclusion is inferred from premises that have been individually chosen. But the important point is that in both cases the only processes of reasoning going on are processes of individual reasoning in the heads of the individual academics; there is no process of collective reasoning as such.

The tenure committee example is used to make a related argument against individualists.[46] For the purposes of avoiding unnecessary complications to this argument let us assume that only one procedure is available and it is flawed. It does not matter whether procedure P1 or P2 is chosen; just select the one that delivers the most intuitively unjust outcome.[47] Therefore, let us assume, our candidate for tenure, Borderline has been wronged. Granted that Borderline has been wronged (as opposed to merely harmed) someone must be responsible for this wrongdoing. However, the members of the tenure committee simply followed the procedure and there was no other possible procedure that they could have followed (we are assuming). So they cannot be blamed. In the absence of any other candidate, the tenure committee *per se* (as opposed to its individual members) must be blamed, or so the argument goes.

However, even if only one process is available to the tenure committee the individual members are still responsible for participating in that process; there is always the option of non-participation.[48] But now let us assume that non-participation is a morally worse option than participation in the flawed process because, for example, unlike Borderline *most* candidates who come before the tenure committee receive a just outcome. If this is the situation then the members of the committee face two bad options and they chose the least worst. If so, then they are not morally culpable since they did the morally right thing, *all things considered*. What of the wrong done to Borderline? Borderline has been wronged and intuitively, and also by the lights of my analysis of joint institutional mechanisms, the members of the committee are jointly responsible for this *pro tanto* wrongdoing; after all they accepted the flawed procedure and deployed it.[49] However, they are not *culpably* morally responsible since they have a justification (or, at the very least, an exculpatory excuse); namely, that they did the morally right thing all things considered. In short, responsibility (whether individual or joint) for wronging someone and (individual or joint) culpability for doing so are simply not the same thing.

Conclusion

In this article I have proffered a relational individualist analysis of what I refer to as joint institutional epistemic mechanisms, and argued that this analysis applies to three

central institutional phenomena, namely: (1) voting in a democracy; (2) financial benchmarks, and; (3) ICT profiling. In doing so, the main collectivist challenge to individualist analyses of such phenomena has been met, since that challenge consists in presenting voting mechanisms and the like as resistant to individualist analysis. I have also explicitly defended my individualist relational analysis against the currently most influential pro-collectivist argument.

Moreover, the application of my notion of a joint epistemic institutional mechanism illuminates various features of these three institutional phenomena, including features that differentiate them. For example, generating financial reference rates and ICT profiling are inherently epistemic activities, whereas voting is a qualified epistemic activity. Again, voting mechanisms and financial benchmarks are critical infrastructure of (respectively) democratic political institutions and financial markets, whereas ICT profiling is merely a (potentially) useful tool.

Further, I have outlined some important normative, including practical, implications of my analysis. These include: (1) Voting in political elections is a *joint moral right* and not merely an individual legal right; (2) There is a moral obligation to make an *informed, rational judgment* in casting one's vote, given the (partial) *epistemic* basis for the moral legitimacy of voting in a democracy; (3) The moral obligation on the part of electoral officers to ensure that there is no electoral fraud (and like practices) essentially derives from the fact that the outcome of free and fair elections is a collective good constitutive of democracy; (4) Electoral fraud is a profoundly corrupt activity, given that the institutional mechanism of voting is a critical component of the political infrastructure; (5) There is a *moral obligation* on the part of financial benchmark submitters and compilers to ensure that their epistemic actions are correct, given that financial reference rates are a *collective epistemic good* upon which market actors rely and the financial system depends; (6) Financial benchmark manipulation is a profoundly corrupt activity, given that such benchmarks are critical infrastructure of the financial system; (7) ICT profiling is a morally problematic activity, given that in itself it is an infringement of privacy and that *qua epistemic tool* it is usable for evil purposes as well as good ones; (8) There are *moral obligations* on the part of those who contribute to ICT profiling to ensure that the specific profiling tasks to which they contribute are morally legitimate ones and that – assuming these tasks are morally legitimate – their epistemic actions are veracious.

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NOTES

1 See, for example, Michael Bratman, 'Shared cooperative activity', *Philosophical Review* 101,2 (1992): 327–341; Raimo Tuomela & Kaarlo Miller, 'We-intentions', *Philosophical Studies* 53,3 (1988): 367–389; Margaret Gilbert, *Joint Commitment* (Oxford: Oxford University Press, 2014), chapter 1; Seumas Miller, 'Joint action', *Philosophical Papers* 21,3 (1992): 275–299; Seumas Miller, 'Intentions, ends and joint action', *Philosophical Papers* 24,1 (1995): 51–67; Seumas Miller, *Social Action: A Teleological Account* (New York: Cambridge University Press, 2001), chapter 2; Seumas Miller, *The Moral Foundations of Social Institutions: A Philosophical Study* (New York: Cambridge University Press, 2010), chapter 1; Seumas Miller, 'Joint

action: The individual strikes back' in S.L. Tsohatzidis (ed.) *Intentional Acts and Institutional Facts: Essays on John Searle's Social Ontology* (Dordrecht: Springer, 2007), pp. 73–92.

2 Seumas Miller, 'Joint epistemic action and collective moral responsibility', *Social Epistemology* 29,3 (2016): 280–302; Seumas Miller, 'Assertions, joint epistemic actions and social practices', *Synthese* 193,1 (2015): 71–94; Seumas Miller, 'Police detectives, criminal investigations and collective moral responsibility', *Criminal Justice Ethics* 33,1 (2014): 21–39; Seumas Miller, 'Collective responsibility, epistemic action and the dual use problem in science and technology' in B. Rappert & M. Selgelid (eds) *On the Dual Uses of Science and Ethics: Principles, Practices and Prospects* (Canberra: ANU Press, 2013), pp. 185–206; Seumas Miller, 'Collective responsibility and information and communication technology' in J. van den Hoven & J. Weckert (eds) *Moral Philosophy and Information Technology* (New York: Cambridge University Press, 2008), pp. 226–250; Miller *Moral Foundations* op. cit., chapter 11.

3 Miller 'Joint epistemic action and collective moral responsibility' op. cit.; 'Assertions, joint epistemic actions and social practices' op. cit.; 'Police detectives, criminal investigations and collective moral responsibility' op. cit.; 'Collective responsibility, epistemic action and the dual use problem in science and technology' op. cit.

4 Miller *Social Action* op. cit., p. 175 and chapter 7; *Moral Foundations* op. cit., p. 51 and chapter 2 (sect. 2); Seumas Miller, 'Collective rights', *Public Affairs Quarterly* 1,4 (1999): 331–346; Seumas Miller, 'The LIBOR scandal: Culture, corruption and collective action problems in the global banking sector' in G. Gilligan & J. O'Brien (eds) *Integrity, Risk and Accountability in Capital Markets: Regulating Culture* (Oxford: Hart Publishing, 2013), pp. 111–128; Seumas Miller, 'The corruption of financial benchmarks: Financial markets, collective goods and institutional purposes', *Law and Financial Markets Review* 8,2 (2014): 155–164; Seumas Miller, 'The global financial crisis and collective moral responsibility' in A. Nollkaemper & D. Jacobs (eds) *Distribution of Responsibilities in International Law* (Cambridge: Cambridge University Press, 2015), pp. 404–433; Miller 'Collective responsibility and information and communication technology' op. cit.; Miller *Moral Foundations* op. cit., chapter 11.

5 See, for example, David Copp, 'On the agency of certain collective entities: An argument from "normative autonomy"' in P. French (ed.) *Midwest Studies in Philosophy,* 30 (2006): 194–221; Christian List & Philip Pettit, *Group Agency: The Possibility, Design and Status of Corporate Agents* (Oxford: Oxford University Press, 2011). For an individualist response see Seumas Miller 'Against the moral autonomy thesis', *Journal of Social Philosophy* 38,3 (2007): 389–409; Seumas Miller, 'Collective moral responsibility: An individualist account', in P. French (ed.) *Midwest Studies in Philosophy,* 30 (2006): 176–193; Miller *Moral Foundations* op. cit., chapter 4; Seumas Miller & Pekka Makela, 'The collectivist approach to collective moral responsibility', *Metaphilosophy* 36,5 (2005): 634–51.

6 V. Mayer-Schonberger & K Cukier, *Big Data: A Revolution That Will Transform How We Live, Work and Think* (London: John Murray, 2013).

7 See, for example, Copp op. cit. More recently, List and Pettit (op. cit.) have proffered arguments along these lines in their presentation of the so-called judgment aggregation problem an earlier version of which appeared in Pettit's 'Groups with minds of their own' in F. Schmitt (ed.) *Socialising Metaphysics: Nature of Social Reality* (Lanham, MD: Rowman and Littlefield, 2003). For a reply see Miller 'Against the moral autonomy thesis' op. cit., 'Collective moral responsibility: An individualist account' op. cit., and Miller & Makela op. cit.

8 Don Fallis, 'Collective epistemic goals', *Social Epistemology* 21,3 (2007): 267–280. See also Miller 'Joint epistemic action and collective moral responsibility' op. cit.; Miller 'Assertions, joint epistemic actions and social practices' op. cit.; Miller 'Joint action' op. cit.; Miller 'Joint action: The individual strikes back' op. cit. I note that having an end is not the same thing as to have an intention. For one thing, conceptually the notion of an end brings with it the notion of a means, whereas this is not so for intentions. An agent can simply intend to raise his arm and do so; such a gratuitous raising of one's arm does not involve a means/end relation, although it is done intentionally. For this reason having an end is not necessarily to be equated with intending *that* a state of affairs, *s*, come into being (nor, more obviously, with the related notion of intending *to* perform an action, *x*). In the arm-raising example, the agent can both intend to raise his arm and intend that his arm be raised. Here that his arm be raised is simply the completion of the act of raising his arm. Philip Pettit and David Schweikard ('Joint actions and group agents', *Philosophy of Social Sciences* 36,1 (2006): 18–35) invoke the intending-to and intending-that distinction to ground another distinction made by various authors, namely, that between jointly producing an effect and joint action (in their favoured sense). However, insofar as the effect of individual actions is an (interdependent) end of each, the examples that they provide of joint action are, on my account, simply a different species

of joint action; specifically, a species in which the individual actions of each constitute the content of the end – and so their performance *is* the realisation of the end. (See Miller 'Joint action' op. cit.; Miller 'Intentions, ends and joint action' op. cit.; Miller *Social Action* op. cit., chapter 2; Miller *Moral Foundations* op. cit., chapter 1; Miller 'Joint action: The individual strikes back' op. cit.). In some cases an agent intends to realise an end and intends the means to that end, e.g. the agent intends to get home (has an intended end to get home) and intends to catch the bus in order to get home (as the means to realise this end). But there are many means/end cases in which the end is not intended, notably cases in which the end is highly unlikely to be achieved, e.g. a poor marksman who points his gun at a distant clay pigeon and fires it having as an end to hit it, but who believes he is highly likely to miss and, therefore, does not intend to hit it. I note that some authors (for example, and as mentioned above, Pettit and Schweikard) want to insist that having an end in this sense is to intend that some state of affairs come into existence. This is misleading, for the reasons given above.

9 If A and B have a mutual true belief that p then p is true and A believes that p, B believes that p, A believes that B believes that p etc.

10 So this account is different from that of Bratman op. cit. I have argued against Bratman's account elsewhere. See Miller 'Intentions, ends and joint action' op. cit.

11 Peter Geach, *Mental Acts* (London: Routledge and Kegan Paul, 1957).

12 See Mark Thomas Walker, 'The voluntariness of judgment', *Inquiry* 39 (1996): 97–119; and Christian Stern's reply, 'Walker on the voluntariness of judgment', *Inquiry* 40,2 (1997): 175–186. Walker replied to Stern in 'The voluntariness of judgment: A reply to Stern', *Inquiry* 41,3 (1998): 333–9. See also Keith Frankish, 'Deciding to believe again', *Mind* 116 (2007): 523–548.

13 Miller 'Joint action' op. cit.; Miller *Social Action* op. cit., chapter 2; Miller *Moral Foundations* op. cit., chapter 1.

14 So there are cases in which you and I perform a joint action successfully and yet when I did my part I believed that you would probably not do yours.

15 And there are stronger and weaker forms of joint action, stronger forms being ones in which the 'glue' binding the participants together is stronger. For example, each agent is morally committed to the collective end and to others being morally committed to this end; so they will intervene to reinforce the commitment of other participants if they look to be 'lapsing'. In this connection, think of small religious groups or fanatical groups.

16 I use the term 'collective' since the term 'shared' tends to have a weaker sense, e.g. two agents who accidently happen to be aiming at the same outcome.

17 Miller 'Joint action' op. cit.; Miller *Social Action* op. cit., chapter 2; Miller *Moral Foundations* op. cit., chapter 1.

18 John Searle, 'Collective intentions and actions', in J. Moran & M. Pollack (eds) *Intentions in Communication* (Cambridge, MA: MIT Press, 1990); Raimo Tuomela, *Social Ontology* (Oxford: Oxford University Press, 2013); Gilbert op. cit. I have argued against *sui generis* we-intentions elsewhere e.g. Miller 'Intentions, ends and joint action' op. cit.; Miller 'Joint action: The individual strikes back' op. cit.; Miller & Makela op. cit.

19 Miller 'Joint action' op. cit.; Miller *Social Action* op. cit., pp. 174–9; Miller *Moral Foundations* op. cit., pp. 50-52; Miller 'Collective responsibility and information and communication technology' op. cit.

20 Miller 'Collective responsibility and information and communication technology' op. cit.; Miller *Moral Foundations* op. cit., chapter 11.

21 There are, of course, any number of alternative voting systems in democracies. However, this does not materially affect the analysis on offer here.

22 This is, of course, subject to various other conditions being met, e.g. that the person is eligible to hold the office in question, the electoral and subsequent processes were not flawed in their operation, and so on.

23 'Coup needed for Thailand "to love and be at peace again" – army chief', *The Guardian,* 22 May 2014, http://www.theguardian.com/world/2014/may/22/military-coup-thailand-peace-general-prayuth-chan-ocha. It is an interesting question as to the point at which situation in which a properly elected leader ought to be accepted by all because s/he is legitimate is transformed into a situation in which a properly elected leader is not legitimate because s/he is in fact not generally accepted.

24 This is, of course, subject to various other conditions being met, e.g. that the person is eligible to hold the office in question, the electoral and subsequent processes were not flawed in their operation, and so on.

25 J.L. Austin, *How to Do Things with Words* (Oxford: Clarendon Press, 1962). See also Seumas Miller, 'Performatives', *Philosophical Studies* 45,2 (1984): 247–60; Seumas Miller, 'On conventions', *Australasian Journal of Philosophy* 70,4 (1992): 435–445; Seumas Miller, 'Speech acts and conventions', *Language Sciences* 22 (2000): 155–166.

26 See John Searle, *Speech Acts* (Cambridge: Cambridge University Press, 1969) for an early formulation of this basic idea, although Searle talks of constitutive rules rather than performative conventions.

27 Miller 'Performatives' op. cit.; Miller 'On conventions' op. cit.

28 Perhaps voters are also, for example, publically expressing their individual right to have a say and, thereby, a potential influence, on who governs them.

29 There are, of course, a wide array of different normative political theories that are relevant here, some concerned with proposing alternatives to interest-based accounts, others with a different take on the legitimacy or worth of the voting procedure itself, e.g. so-called proceduralists versus consequentialists of different stripes. Moreover the notion of epistemic democracy has come to the fore recently. Roughly speaking, in this context it is the idea that there is some objective best or right outcome and that, for example, voting procedures are to be assessed on whether they deliver that outcome. Proceduralists reject this. See, for example, David Estlund, *Democratic Authority* (Princeton, NJ: Princeton University Press, 2007).

30 It is also obviously deficient *qua* epistemic procedure, e.g. demagogues are elected. However, that is a different matter.

31 Miller 'The corruption of financial benchmarks: Financial markets, collective goods and institutional purposes' op. cit.; Miller 'The global financial crisis and collective moral responsibility' op. cit.

32 *The Wheatley Review (Final Report)* (London: HM Treasury, September 2012): http://www.hm-treasury.-gov.uk.

33 Martin Wheatley, 'Pushing the reset button on LIBOR', Speech to FSA, London, 26 September 2012: http://www.fsa.gov.uk/library/communication/speeches/2012/0928-mw.shtml.

34 Miller 'The LIBOR Scandal' op. cit.

35 The process is slightly more complicated than this since outliers are first eliminated. This makes no difference to my argument.

36 Their consequences cannot, of course, be ignored if they have already been relied upon to make financial decisions.

37 Seumas Miller, 'Joint actions, social institutions and collective goods: A teleological account' in A. Konzelmann-Ziv & H.B. Schmid (eds) *Institutions, Emotions and Group Agents: Contribution to Social Ontology* (Dordrecht: Springer, 2014), pp. 99–115; Miller *Moral Foundations* op. cit., chapter 2.

38 The definitions of these terms are problematic. However, roughly speaking, a non-rival good is one such that its enjoyment by one does not reduce the amount available for enjoyment by others, and a non-excludable good is one such if it is available to some then others cannot be effectively excluded from enjoying it.

39 Mayer-Schonberger & Cukier op. cit.

40 Miller 'collective responsibility and information and communication technology' op. cit.; Miller *Moral Foundations* op. cit., chapter 11.

41 Miller 'Assertions, joint epistemic actions and social practices' op. cit.

42 In this respect the relationship between police officers and their quarry is quite different from competitive relationships in the marketplace.

43 See, for example, Copp op. cit.; Pettit op. cit.; Pettit & List op. cit.

44 Miller 'Against the moral autonomy thesis' op. cit.; Miller 'Collective moral responsibility: An individualist account' op. cit.; Miller & Makela op. cit.

45 This is not to say that there are not cases in which only a single member is implicated, e.g. if one member falsified submitted documents.

46 See Copp op. cit.; Pettit op. cit.

47 There are various permutations of this scenario. For example, the outcome could be one which leads to tenure being granted to Borderline but tenure being denied unfairly to other candidates. See Andras Szigeti, 'Are individualist accounts of collective moral responsibility morally deficient?', in A. Konzelmann-Ziv & H.B. Schmid (eds) *Institutions, Emotions and Group Agents: Contribution to Social Ontology* (Dordrecht: Springer, 2014). See also Seumas Miller 'Joint epistemic action and collective moral responsibility: Reply to Andras Szigeti', *Social Epistemology Review and Reply Collective* 4,8 (2015): 40–50.

48 Or at least there is the option of non-participation on pain of removing their responsibility entirely, as in a case where the members were coerced into participating in the tenure committee and using the flawed procedure in question.

49 It might be argued that the members of the committee did not know that the procedure would deliver a bad outcome and therefore are not responsible for it. But, as my analysis of joint institutional mechanisms shows, participants in these mechanisms know, or should know, that the results typically or, at least, often cannot be known in advance of the operation of the mechanism and they should also know that, therefore, these results might be untoward in various ways.