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Procedural Fairness in Economic and Social Choice: Evidence from a Survey of Voters

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Abstract

The paper argues for the relevance of procedural justice to social choice and presents supporting evidence from primary data on voter attitudes. A preliminary section proposes and discusses five propositions that indicate the potential value and significance of processes for social choice. Section 3 considers evidence for what psychologists have called 'voice' and the extent to which control over, or representation in, a decision is compatible with other economic notions of fair process, like random choosing. Section 4 examines empirical evidence that sensitivity to process fairness may be a means of dealing with power inequalities between interacting agents. Section 5 goes on to examine evidence concerning treatment which in some way is threatening to a person's position as an agent. A brief concluding section summarizes and indicates avenues for future research.

Keywords: procedural fairness, empirical social choice, random choosing, regard, cheap talk

PsycINFO Codes: 2360, 3000, 3020
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1 Introduction

Fairness and process are of long-standing interest to economists though the importance of the conjunction is, in some literatures, a more recent phenomenon[1]. Even if humans were always and exclusively consequentialist in the sense of neo-classical welfare economics (a characterization that is the subject of an exemplary discussion in Sen, 1979), judgement would remain a ubiquitous feature of production processes and consumption activities. Typically, judgements are instrumental, effect others, and are constrained in their formation – frequently the decisions to which they give rise are subject to challenge on grounds of fairness and this can be seen at both macro and micro levels. A worker passed over for promotion can appeal the process, if the decision can be shown to be based on inappropriate criteria; citizens may take legal action if consultation about the location of a facility for the storage of hazardous waste is insufficient and on. As it happens, both decisions have been the focus of empirical investigation, by an organisational psychologist, Greenberg (1986) in the former case, and by a group of Swiss economists, Frey and Bohnet (1995) and Frey, Oberholzergee and Eichenberger (1996), in the latter.

Work on theoretical social choice in recent years does, however, allow that consequences are not everything and that people may have rights (often referred to as examples of de-ontological constraints). Sometimes the rights implied by legal enshrinement are substantive ('thou shalt not steal') but frequently they refer to Questions of treatment. A person accused of committing a crime, economic or otherwise, is, under most circumstances, accorded rights to have the case heard in certain ways and sometimes fairness of process overrides the requirements of formal decision theory – making the right decision. People 'get off' on technicalities because certain due processes have not been implemented correctly[2]. Alternatively, information concerning previous criminal records is not presented to the jury though statistically it conditions the probability of offending behaviour. Even if, at some level, many notions of fair treatment exist because they promote good outcomes, given the level of description at which economists work, it seems natural to say that people and groups value processes as well as outcomes[3].

The reasons for being interested in economic implications of procedural justice are both inherent and instrumental. Concern for fairness of outcome distributions may constrain profit-maximization, as Kahneman, Knetsch and Thaler (1986) argued in an *American Economic Review* article now widely cited by economists and social scientist alike. Indeed, it is commonplace in behavioural game theory, for example, to acknowledge that hard bargaining may well result in money being left on the table. But, equally, concerns about process fairness often do seem directed at efficiency that may throw a slightly different complexion on how we think about fairness. Fairness is part of our morality, but it would be wrong to think of it as having a necessarily altruistic basis – a point that Rabin's (1993) game-theoretic account of

[1] See for instance work by Meade (1976), Varian (1976), Baumol (1986), Roemer (1994), Young (1994), Eichberger and Kelsey (1996), Konow (1996), Offer (1997) and a wide-ranging review by Lunati (1997).

[2] For some time in Ireland, the test for sobriety in car-drivers depended on the driver's ability to walk the white line in the middle of the road. Notoriously, a prosecution could fail if it transpired that a button on the policeman's tunic was undone while the test was being conducted.

[3] Such an argument can be found elsewhere 1989 – see for instance Machina's (1989) argument for the use of non-expected utility.

fairness as reciprocity with respect to beliefs about opponent intention helps make rather clearly[4].

Though there is a large psychological literature on procedural fairness, some of it theoretical, relatively little discussion of applications to economic theory or behaviour currently exists. An idea widespread in economics is that random choosing may, in certain circumstances, be a fair method of allocating a scarce resource. There is relatively little empirical evidence about this, though the idea does not feature prominently, if at all, in the literature on fair procedures which implicitly assumes decisionmaking to be prudential. Perhaps the oldest criterion is that of voice – '*audi alteram partem*' to use Augustine's phrase. Literally, this means 'listen to both sides' or 'give each side its say', an idea that psychologists have expanded to cover the extent to which a person has control over a decision. It is not difficult to think of situations in which these two principles come into conflict: some people think health-care resources should be allocated using randomizing procedures whilst others believe in prioritization or provision for all [sic]. As it happens, this study will show evidence of situations in which people judge random choosing not to be fair; a finding that illustrates a more general methodological point. Empirical evidence about attitudes to fair process is useful not only because organizational life is, actually, governed by procedures (a point sociological theorists are keen to repeat) but also because this evidence can have an impact on the desirability, or otherwise, that theorists ascribe to abstract principles of justice.

This paper seeks to make a start on some of the issues raised by identifying and beginning to address a gap in the literature. It employs a similar methodology to that used by Kahneman *et al* in their study of attitudes to distributive fairness in economic contexts[5] and is structured as follows. Section 2 proposes and discusses five propositions concerning the significance of procedural justice for economic theory and applications. Sections 3–5 discuss aspects of procedural justice, describe specific (sets of) related hypotheses and report corresponding empirical results using our own primary data. Section 6 provides a brief summary and indication of avenues for future research. Methodological details of the survey procedure and the sample characteristics are summarized in the appendix.

2 The Significance of Procedural Fairness – Five Propositions

Procedures regulate the interactions of agents. There are many ways in which consumers, employees, voters and household members can be treated unfairly. If states of affairs were all that mattered (as welfare economics and the moral philosophy of consequentialism which underpins it maintains) then why should we expend resources on issues of process? Below, we discuss five propositions that help summarize some of the more important issues. In this section,

[4] Belk and Coon (1993) provide evidence of an interesting twist in the reciprocity story. Using diary-based evidence of gift-giving between dating couples, they identify three phases of present giving. Initially, the exchange is clearly instrumental but then it becomes expressive and finally, if it gets that far, it seems to be simply celebratory. The instrumental stage involves giving in the expectation of almost immediate reciprocation whilst the expressive stage involves the giving of items that say something about who each party is, and what kind of person they think the other is (what type of player they believe their opponent to be!). What we have called the celebratory stage seems to have little to do with the exchange of objects or information and its significance appears to be more existential than anything else.

[5] A paper that has sought to extend this work is Bies, Tripp and Neale (1993). One of the main contributions is to provide a replication of findings due to Kahneman *et al* (1986) but they also show that reference points and procedural factors determine judgements of outcome fairness.

we identify five reasons why procedures and their fairness might be of concern to individuals and/or considered legitimate by those not directly involved in the allocation.

Proposition 1: Resource allocation conflicts are such that no exclusively outcome-based resolution is available.

The issues concerning logical problems of democratic and, in general, group choice are outlined in the seminal results in social choice theory by Arrow (1963) and Sen (1971). The interpretation and implications of these theorems (and ones like them) have been discussed at considerable length. Ken Arrow, for instance, has discussed the plausibility of dropping one of his assumptions (independence of irrelevant alternatives) for the reason that changing feasibility sets might make decision makers feel differently about options. Amartya Sen, by contrast, focuses on a direct conflict between economic efficiency and a minimal concept of freedom of choice, arguing that, within the conventions of social choice theory, the clash is, in some sense, ineliminable. Constraint in group choice is a central aspect of economics and in reality the resolution of these conflicts require a process of discussion and negotiation between the parties involved, yet the conceptual framework of social choice theory and welfare economics makes it difficult to analyse the impact of process choices. In political conflicts, for instance, mediated discussion between the parties seems to be a necessary but not sufficient condition for conflict de-escalation but why this should be so is a difficult Question to pose within a framework that takes preferences over outcomes as given and all that matters. Without denying that the convention of assuming preferences to be completely ordered, it is useful also to acknowledge alternative assumptions might be useful also. (For example, neo-classical market theory works on the assumption of zero transaction costs while institutional theories of the firm depend on the opposite assumption.) In mathematical theory, partial orders are recognized as possible, if not helpful, and in naturalistic decision theory, decisions are the subject of a constructive process undergone by the individual involved. In group-choice, there is evidence of a strong preference for negotiated settlements to ones based on technical considerations, whether they are those that derive from natural science or economics. In principal, negotiation-based procedures might be perceived as fair and/or effective for a variety of reasons: they allow parties to construct new options for mutual gain; they enable parties to develop some respect for, and understanding of, each other's projects; and they allow, under certain circumstances, for the revelation of preferences as opposed to the iteration of positions. In short, decision processes play a role in resolving the preference-grounded conflicts analysed by social choice and welfare theory, precisely because a core assumption of classical decision theory – notably that options and preferences are given and complete – is usually false.

Proposition 2: Outcome uncertainty may be so pervasive that processes are all we can monitor or control.

Incentive systems depend crucially on the appropriate allocation of rewards or penalties *ex post*. Outcomes can be clear while the processes that caused them remain obscure: high sales in a particular month may be due to a rep's hard work, or brute luck; collusion between firms may be obvious to the consumer but difficult to prove if it results from co-ordination through focal points. The importance we attach to the fairness of procedures is possibly nowhere clearer than in the context of legal trials. In many cases our notions of what constitutes fair process are

consistent with the requirements of an optimal outcome. That we think it unfair for the prosecution to withhold or delay revelation of evidence is consistent with the full information principle – a better decision is one which uses more relevant information. On the other hand, many criminal justice systems do not allow the use of information about previous criminal records even though (and possibly because) it would condition the relevant probabilities to such a degree that the facts of a particular case would carry, in comparison, little weight. The legal system epitomises a certain kind of social choice problem: uncertainty is high and procedures are tightly controlled by rules designed to make sure that, on average, the correct decision is made.

Proposition 3: Fair processes might bring about efficient outcomes.

In his attempt to provide a normative model of public choice, the philosopher John Rawls (1971) argued that a fair procedure would give rise to a fair (and equitable) distribution of primary and other goods. The procedure he proposed, a counterfactual contract agreed under a veil of ignorance that precluded knowledge of their positions in the final allocation of primary goods and resources, leads to an egalitarian distribution of outcomes. Rawls' theory was discussed extensively throughout the social sciences (including economics and philosophy) for many reasons, not least of which was the fact that the counterfactual thought experiment seems to identify a fair and impartial process. The link between fair process and efficient outcome is not confined to philosophy, however. Greenberg's (op cit) work on aspects of fair promotion decisions in organizations finds criteria which are, on the whole, consistent with the efficient running of businesses. Possibly most significant is the view that market processes are fair ones because they bring about efficient outcomes, a view summarized in the two fundamental theorems of welfare economics. Indeed some economists, notably Austrians, have turned the argument on its head. Hayek, for instance, believed that inegalitarian distributions of outcomes were fair because they resulted from market processes that were fair by virtue of the fact that markets were natural kinds.

Proposition 4: We may wish to impose limits on the discretion of those in positions of power.

Many organizational dilemmas can be regarded as examples of what game-theorists regard as overlapping principal-agent problems. Owners/citizens cannot perfectly monitor efforts of managers/politicians who, in turn, cannot perfectly monitor efforts of workers/civil servants. For example, if managers in large scale organizations benefit most from their relative performance, as advocates of tournament theory argue they do, then the incentive is to use the discretion they have to reward subordinates who would do most to support their bosses' relative position. This will not, in general, reward most those who contribute most to corporate goals, so there may be a need for a mechanism which limits the impacts of favouritism. Asking managers to account for promotion decisions, making the criteria used explicit and objective, and allowing for appeals against such decisions would all go some way to constraining the extent to which managerial judgements deviate from what would be optimal from a shareholder's perspective. As it happens, these criteria are just some of those identified by Greenberg.

Proposition 5: Situations may exist in which the treatment process has a (dis)utility that is interpreted as being (un)fair.

Thus far, the reasons for being concerned about process have related, ultimately, to outcomes. But, there may be processes which, in some sense, have an impact that is independent of the ensuing consequences. One way in which this could happen is if people evaluated overall fairness by aggregating their evaluations of outcome and process fairness. A second possibility is that apart from wealth, which is naturally thought of as an outcome, people are concerned about their *agency* status. Everyone has one vote these days. Failure to observe common courtesies might, by contrast, be taken as implying a belief that someone is inferior – not of equal status, as a person. We know that cheap talk has an impact on behaviour in games even though it does not alter the game structure in neo-classical game theory: one reason for this is that players are able to establish, albeit imperfectly, their mutual relations as agents, not just as owners of possible payoffs. Supporting this view, some of the earliest procedural fairness research found that conflict resolution procedures which were perceived to be fair lead to greater outcome satisfaction on the part of both winners and losers.

This set of propositions is not intended to be comprehensive but it identifies some of the more basic reasons why economic processes will be shaped by fairness considerations. Fairness may constrain profit-maximization as Kahneman *et al* (1986) argue, and as behaviour in experimental ultimatum games demonstrates, but it can also serve to *facilitate* profit-seeking and trade in general by helping to overcome decision problems arising from informational asymmetries or preference conflicts. In his analysis of justice, the philosopher John Lucas (1980) suggests that to say something is unfair is tantamount to making a moral claim above argument. The analysis sketched here suggests a different view. Procedural fairness is closely linked to considerations about consequences: complaints about unfair processes are often underpinned by the view that fair procedures produce desirable outcomes. Moreover, when incorrect or inappropriate treatment is described as unfair, this can be a signal that others not directly involved, that they have reason to see the problem rectified. For to behave unfairly towards a consumer or a worker, say, is to violate a rule of consideration that should be applied to all people in similar situations – it poses a threat therefore to those who might find themselves in similar situations – not just those in them. These propositions help identify the conceptual arguments that economists would use in developing a specifically economic theory of procedural justice – there is some overlap with the currently available psychological theories which have inspired applications to economics but there seem to be new insights as well.

The second half of the argument to follow – that procedural justice matters for economic behaviour – is based on an analysis of evidence derived from primary data. In general the two parts should be seen as complements describing, respectively, theoretical and empirical reasons why procedural justice might affect economic behaviour. This is not to be unexpected as some of the propositions above make claims about the rationale for particular institutional designs – as economic theories do – which do not necessarily directly observable. That said, the claim about procedural fairness as a constraint on the abuse of discretion above is clearly related to the Questions posed in Section 4.

3 Voice

Voice, defined loosely as the right to have one's own preferences reflected in social choice, is a recurrent and distinctive feature of procedural fairness. The idea has a long tradition in legal philosophy that can be traced back to writings of Aristophanes. It serves instrumental purposes but seems also to meet an expressive need that may not, in some sense, be consequential – nine people from a committee of 10 may have spoken on behalf of a motion but the last person still has a right to say their piece, even if a reversal of the decision is inconceivable. However damning the evidence is that someone committed a murder, the legal system ensures the right to be represented by expert counsel, to be free from cruel interrogation, for rules of admissible evidence to apply, and so on.

In this sense, then, we might distinguish between a 'micro-' and a macro-' aspect of voice. At the micro-level, the agent is concerned that his/her rights to perform specific acts, like the right to put across one's own side of the story, are honoured. In this sense, the point is about direct involvement, or control, as psychologists think of it. On the other hand, there is a macro-sense that might be more important when transaction costs make the expression of views by every single individual involved infeasible. In such circumstances, the primary concern of the agent may just be that a hearing is given to some representative individuals, possibly to people in similar situations but at the very least to others who can articulate similar views.

Our empirical investigation was designed to examine two observations that are discussed by economists. The first is the observation that, though random selection can often impose *ex ante* fairness on a situation in which the *ex post* distribution must be unfair (or at least unequal), many subjects reject random choosing (RC). One explanation is this: people reject RC on the grounds that it is an unfair procedure, and the basis of the unfairness claim is that the proposed imposition of RC reduces to a minimum their control over the decision-making process. However, if this is right, then perhaps one way of making RC seem fairer is to allow subjects to choose and/or operate the randomizing device. To test this proposition, we elicited RC preferences using the following pair of Questions[6] and a variant in each case:

1. Two adults arrive at Casualty with a life threatening condition that does not affect their ability to make decisions. The doctor explains that there are resources only to treat one patient and then proposes that she will decide which one is to be treated by tossing a coin. If you were one of these patients would you think that a doctor's choice based on a coin toss was a fair way of choosing which patient to treat?

2. You work for a small firm and your boss considers how to distribute a one-off Christmas bonus of £1000 between his five employees – including yourself. S/he considers two options: option A) Conduct a lottery between the five of you and give £1000 to the

[6] One reader made the point that the Questions in this study seem to be randomly chosen. This is an interesting point to make as it is not conventional to justify the design of Questions or vignettes beyond that they relate to the phenomena which they are designed to explore, and do so in ways that satisfy certain criteria. In this case, we were concerned with two criteria, first that the Questions should be sensitive to the phenomena under investigation and second that they should be valid (i.e. relate to real economic phenomena). Clearly the situations designed are developed so as to highlight the operation of procedural justice issues by using examples in which procedural justice is more likely to play a role – this is standard research design and the justification is the same as that for developing a theory which is unrealistically simple but nonetheless reveals an important part of the causal structure.

winner. option B) Give £200 to each of you. S/he then decides to conduct the lottery (option A).

Table 1 Voice as Control[7]

	VF	*F*	*U*	*VU*	*Mean*	*Std Err*
Question 1						
Doctor Randomly Chooses (DRC)	2	7	18	29	3.321	0.10
Patients Toss Coin (PTC)	3	4	10	45	3.565	0.11
Question 2						
Boss Imposes Lottery (BIL)	2	8	18	34	3.355	0.11
Workers Vote for Lottery (WVL)	1	13	28	26	3.162	0.10

Question 1: $c^2 = 6.475,\ df = 3,\ p = 0.091.$ $Ha: \bar{u}(DRC) > \bar{u}(PTC);\ |t| = 1.59, df = 114,\ p = 0.057.$

Question 2: $c^2 = 4.497,\ df = 3,\ p = 0.213.$ $Ha: \bar{u}(WVL) > \bar{u}(BIL);\ |t| = 1.36, df = 125,\ p = 0.088.$

Two statistical procedures provide particularly natural ways of analysing the data and we report the results of applying both. A chi-squared test can be applied to the results of a 2 x 4 contingency table (providing a non-parametric test for distribution differences) whilst an alternative approach involves a one-tailed, two sample t test. The t test allows for comparisons of means and is more often used for this kind of data though the data is ordinal and therefore more properly analysed by a non-parametric test. Throughout, we shall present the results of both tests.

Overall it is very clear that more people think random choosing to be unfair or very unfair than either fair or very fair – the results are statistically significant and one can see this by inspection. However, when it comes to tests of the more interesting claim – namely that random choosing is unpopular by virtue of the control it removes from decision makers, our results are more equivocal. The difference in Question 2 is in the direction predicted but can only be said to be approaching significance at the 5% level and then only on the parametric test. By contrast the difference between treatments in Question 1 is closer to being significant on both tests but in the wrong direction. Formally, one might say that this just doesn't support the hypothesis but the

[7] Throughout we shall use these letters in the obvious way to record the five options presented to subjects: Very Fair, Fair, Unfair, Very Unfair and Don't Know. Means are calculated by assigning the semantic categories to integer scores – VF = 1, F = 2 etc. The resulting four-point scale is a measure of unfairness therefore.

result is so close to being significant in the wrong direction that it is worth speculating about the cause.[8] One possibility is that there is a reversal of ordering in the domain of unfairness – subjects clearly think both proposals are unfair or very unfair and it could be that in such situations, preferences reverse. The analogy can be made with prospect theory in which a reference point determines attitudes to risk. In the domain of gains people are risk-averse and this is not difficult to understand. However, in the domain of losses, people tend to be risk-preferring and whilst this is rational, there is something surprising about the finding. It could be that in an unfair situation, people would rather not have control themselves – an interpretation which is similarly rationalizable but not immediately obvious.

A related point beginning to emerge from the literature concerns a general apathy amongst the lay public towards economic methods of valuing public goods (bads). Empirical survey evidence (Frey *et al*, *op cit*) suggests that the use of economic measures of subjective value, such as willingness-to-pay (WTP) or minimum reservation price (MRP), are often supported by less than a quarter of voters whilst expert opinion fares a little better: frequently negotiation does best of all. So far, there is no theoretically grounded explanation as to the origins of these results but part of the answer can, we suggest, be found in the importance people attach to having their interests directly represented (what we called voice at the macro level). We hypothesized that there would be more support for the use of economic measures of valuation if it were made clear that they were being used, not to finesse a social choice problem but as part of a deliberative decision process. (This is rather how such measures are used in practice though it is surprisingly difficult to find a normative justification for this within the conceptual apparatus provided by standard welfare economics.) To assess preferences for consultation we asked respondents two Questions as follows:

3 It is widely believed that nuclear waste produced over the past 30 years should best be stored on land. A country is considering three possible sites from which one must be chosen. Three possible approaches have been suggested as ways of determining which site to use and you are asked to evaluate the fairness of each/one of the following:

Approach A: Negotiation between the government and representatives of communities of the three possible sites.

Approach B: Technical analysis of financial and non-financial costs and benefits associated with each site.

Approach C: Negotiation between the government and representatives of the communities in conjunction with a technical analysis of the financial and non-financial costs and benefits associated with each site.

4 The government is considering whether or not to allow the import of a novel food product. It believes that the risks to health are small and very similar to those found in food products already purchased by consumers. After some limited consultation with consumer groups, it decides to allow the importation of the food product.

[8] I am particularly grateful to an anonymous refereeing for prompting me to consider this finding more closely.

Table 2 Voice as Representation

	VF	*F*	*U*	*VU*	*Mean*	*Std Err*
Question 3						
Negotiation (N)	29	60	24	10	2.122	0.08
Technical Analysis (TA)	13	46	38	26	2.626	0.08
Both	65	51	6	1	1.537	0.06
Question 4						
Limited Consultation (LC)	9	29	16	7	2.344	0.11
Extensive Consultation (EC)	15	42	7	4	2.000	0.09

Question 3: $Ha: \bar{u}(N) < \bar{u}(TA)$; $|t| = 4.91, df = 121, p = 0.000$

$Ha: \bar{u}(N) > \bar{u}(Both)$; $|t| = 6.37, df = 121, p = 0.000$

Ha: u(TA)>u(Both); |t| = 12.06, df=120, p = 0.000

Question 4: $c^2 = 7.864, df = 3, p = 0.049$. $Ha: \bar{u}(LC) > \bar{u}(EC)$; $|t| = 2.38, df = 125, p = 0.010$.

Our results are statistically significant in all cases. All three versions of Question 3 were given to respondents of both versions of the questionnaire – a chi-square analysis is not appropriate but we present instead the results of a related samples t test, which does at least make allowance for the fact that responses to different versions of Question 3 cannot be regarded as independent. One of the reasons why the use of Willingness to Pay (WTP) and Minimum Reservation Prices (MRP) might be objected to by voters is that, like the sole use of other forms of technical expertise, their use implies a crowding out of representation and negotiation processes that are deemed essential. However, our voters are not technophobes: when we compared their preferences for negotiation, and negotiation with technical input, we find it is the latter that is regarded as fairer.

4 Constraints on Power and Threats to Freedom of Choice

In most economies, the prices of only a few goods or services are directly regulated, though other aspects of the trade can be highly controlled via trades descriptions acts and other forms of consumer rights legislation. State intervention to promote truth-telling in the sales process has a long tradition that continues to develop as we see the development of legislative constraints on some of the more potent promotional technologies. In the case of financial product selling, a cooling-off period is often mandated during which the consumer is free to change his/her mind – notwithstanding the fact that they may have signed a document which will become legally binding. One possible reason for such process constraints lies in concerns about the outcome:

high-pressure sales techniques can be argued to be unfair because they increase the chance that utility maximizing choices will not be made. If the potential loss from having made the wrong decision is large, perhaps because purchase/switching costs are high, the commitment is long term, or the consumer is not fully responsible, then constraints on the selling process may increase economic welfare via long-term, allocative efficiency improvements in consumption. However, we should not forget that there may be a more direct reason for constraining the selling process: some methods may be so unpleasant (intimidation) or so powerful (subliminal advertising) that we believe a blanket ban to be appropriate regardless of the measurable welfare effects.

Concretely, we hypothesized that sensitivities to fair process are often linked to inequalities between interacting agents, be they individuals within firms, markets or other non-market institutions designed to support co-operation. To test the claim we asked subjects Questions about the fairness of selling and firing processes in two contexts which differed with respect to the relative power of the actors involved (see Questions 5 and 6 below).

5 A company is selling time-shares in holiday homes to clients who are ordinary people on holiday. It takes potential customers to a hotel where it makes a presentation lasting one hour during which free glasses of wine and salted nuts are distributed liberally to the audience. By the end of the presentation, Fred, one of the holiday-makers is feeling somewhat merry and signs up for a one week time-share costing £500 per year for the next five years. He regrets it later. Do you think the process by which the sale was made was fair?

6 The managing director of a small company finds that the head of finance/junior manager has a made a serious error of judgement and she asks the director/manager to resign immediately. How fair is the managing director's request?

Table 3 Fair Process and Agent Inequalities

	VF	*F*	*U*	*VU*	*Mean*	*Std Err*
Question 5						
Company Rep (CR)	6	15	25	16	2.823	0.08
Private Holiday-Maker (PHM)	1	7	27	33	3.353	0.12
Question 6						
Head of Finance (HF)	8	21	22	7	2.483	0.12
Junior Manager (JM)	4	17	33	10	2.766	0.09

Question 5: $c^2 = 12.204,\ df = 3,\ p = 0.01.$ Ha: $\bar{u}(CR) < \bar{u}(PHM);\ |t| = 3.59, df = 115,\ p = 0.000.$

Question 6: $c^2 = 4.199,\ df = 3,\ p = 0.241.$ $Ha: \bar{u}(HF) < \bar{u}(JM);\ |t| = 2.51,\ df = 122,\ p = 0.007.$

The results for both Questions are significant in three out of the four tests and in all cases the unfairness differences are in the direction predicted. If we have a sense of fair process, in part to counter-balance the power inequalities between interacting agents, then we might find particular processes judged less acceptable the greater the inequality between the agents – and this is just what our evidence seems to be saying.

5 Fair Process, Regard and Agency

One of the reasons that certain procedures are judged unfair is, we suggest, that they serve to undercut the basic notion of equal regard. On the one hand, people are more than just agents in the sense of decision or game theory. Rather they have, with the exception of a few pathological cases, a notion of self that comes with it, *inter alia*, a set of deep and not necessarily everywhere consistent expectations about that person's relationship to others. In addition, there are situations in which non-binding utterances can affect behaviour. The impact of cheap talk on behaviour in games is now well understood, particularly as a focusing device in co-ordination games, but it is also becoming evident that communication and interaction may be subject to other non-standard influences like politeness. Traditionally, neo-classical economics has not found it easy to regard such aspects of behaviour as important when compared with the impacts of 'high-powered' incentives, despite the fact that there is nothing in the formalism of utility theory that prevents one from using it to capture such sensitivities. If a person's behaviour exhibits aversion to impoliteness, there is no reason why we (or at least the neo-classicist) should not infer that the person has corresponding preferences.

At least for present purposes, we find it useful to think of unfair procedures having their effects, not *via* a person's preferences, but rather through their concept of self. Actions (verbal insults for example) that may have no apparent impact on a person's expected wealth levels can be deeply disturbing to someone who sees them as threatening to their status as a person. In economic contexts, we believe that requests for certain kinds of information, sensible as they may seem from an efficiency view-point, can be threatening in just this way (and are therefore resisted by policy-makers). To test this, we asked subjects about demands for information imposed by employers and insurance companies using Questions and variants that implied varying degrees of self-association (see below).

7 Do you think it is fair for insurance companies to require a genetic/blood sample when determining whether a person is given life insurance?

8 Do you think it is fair for an employer to require a written personality/skills test when determining whether a person is given a job?

In Questions 7 and 8, we assumed that genetic and personality tests come closer to providing information which might be threatening to a person's notion of self, than blood and skills tests and that, therefore, the use of the latter would be judged to be fairer.

Table 3: Fair Process and Requests for Agent Related Information

	VF	*F*	*U*	*VU*	*Mean*	*Std Err*
Question 7						
Genetic sample (GS)	7	11	22	20	2.917	0.13
Blood sample (BS)	12	24	18	11	2.431	0.12
Question 8						
Personality test (PT)	11	20	17	12	2.500	0.11
Skills test (ST)	23	30	7	5	1.908	0.13

Question 7: $c^2 = 8.972,\ df = 3,\ p = 0.030.$ Ha: $\bar{u}(Gs) > \bar{u}(Bs);\ |t| = 2.74, df = 121,\ p = 0.004.$

Question 8: $c^2 = 13.105,\ df = 3,\ p = 0.004.$ Ha: $\bar{u}(Pt) > \bar{u}(St);\ |t| = 2.67, df = 119,\ p = 0.004.$

In both cases, the results are unequivocal: genetic testing is seen as less fair than blood testing, and personality testing is seen as less fair than skills testing. Requests for information that is either more revealing and possibly more damaging to the person's sense of value as an agent are perceived as being less fair.[9] In their survey, Lind and Tyler (1988) sketch two possible models of fair process: our evidence here is consistent with their second model in which fairness perceptions and notions of agency are closely linked. Requests for information may be unacceptable if they risk undermining a person's worth, even if the efficiency losses are the result. Such requests are, in effect, a form of rights violation and further illustrate the problems with theories of economic welfare which are purely consequentialist – see Sen (1979) or Kolm (1994).

Closely related, we argue, are issues to do with manners and insults. Despite the existence of saws such as 'sticks and stones may break my bones but words may never hurt me' it is commonplace that an indiscreet word or phrase can have devastating effects on relations in the workplace, family or other social settings. Furthermore, institutionalized forms of discrimination often go hand-in-hand with systematic personal verbal abuse, so whilst insulting treatment may not necessarily be linked with fairness, in practice the two are often related. To test this proposal, we developed two Questions that support manipulation of the inappropriateness of communication between two agents. Question 9 is based on the ultimatum game which has been studied extensively in experimental settings and is accepted as demonstrating a class of games in which human subjects, in two different roles, persistently violate elementary predictions of

[9] It has been suggested that people might think the genetic information somehow affects the way insurance companies behave differently to the way in which blood group based information. This could well be true though if it were it could suggest a misunderstanding about the way in which such tests will be used. For the most part and in the medium term, genetic tests are likely only to further refine the population partitions used by actuaries – an insight I owe to Dr A McCarthy of Glaxo Welcome. The possibility remains that this misunderstanding influenced judgements of fairness.

conventional game theory, Guth, Schmittberger and Schwarze (1982). The ultimatum game is one in which a player proposes a division of a sum of money to which the second player can respond only by accepting or rejecting the offer. If the offer is rejected, both players receive nothing; otherwise each receives the division proposed by the first player. Concretely, if the players are to divide $100 and are constrained to integer divisions, game-theory predicts that the first player will propose a split giving herself $99 and that her opponent will be willing to accept $1. Empirical evidence, by contrast, shows that equal splits are often proposed and that unequal splits with positive payoffs for both parties are often rejected. We argue that part of the story lies in the fact that unequal splits are regarded as insulting and avoided or rejected by those who are averse to actions that could be taken as signals of disrespect. If this is right, then we should be able to change the extent to which unequal splits are deemed unfair by allowing players to emphasize that an unequal offer is not to be taken as a personal insult but rather is a reflection of the predicament in which the players find themselves.

Question 10 looks at the relationship between fair process and insult by examining the extent to which inappropriate communication media can raise the probability that a decision will be judged unfair. In this case, we hypothesised that warning and sacking decisions are ones that threaten a person's sense of self-worth and that these will judged fairer if they are made by some face-to-face encounter and not just in writing. Only one variant of the question includes a face-to-face encounter while and we predicted that the face-to-face process would be judged fairer.

9 You are in a 'game' in which you are one of two players who have to divide £100 given to you by an experimenter. The other player must suggest a division of the money and you can accept the proposed division, whatever it is, or reject it. If you accept the proposed division then that is what you will both get. If you reject the proposed division, neither of you will receive anything. Both of you know all this. Your opponent proposes the following split £90 for herself and £10 for you. Your opponent also makes the following point – this may not be an equal split but it is the only logical thing to do – responsibility, if there is any, lies with the designer of the situation, not the proposer. S/he believes you would do the same under similar circumstances and that such a response would be entirely understandable. What would you do'?

Accept the proposal – division is £90 for your opponent and £10 for you
Reject the proposal – division is nothing for both of you
Don't know

10 John's work is not up to scratch so his manager calls him in and discusses with him, face-to-face, the problems and possible remedies. At the end of the month, there are many complaints about his rudeness to customers and other members of staff and he is given, in person and in writing, the contractual period of notice to leave. Is the manner of John's sacking fair?

Table 4: Insulting Threats to Agency as Unfair

Question 9	*Accept*		*Reject*			
	n	*%*	*n*	*%*		
You would do the same (Y)	18	30	42	70		
Take it or leave it (T)	15	23	50	77		
Question 10	VF	F	U	VU	Mean	Std Err
Written and Oral Warning (WOW)	19	27	13	2	1.967	0.10
Written Warning (WW)	3	4	20	40	3.448	0.10

Question 9: $Ha: p(accept/Y) > p(accept/T)$; binomial test not significant.

Question 10: $c^2 = 64.427,\ df = 3,\ p = 0.000.\ \ Ha: \bar{u}(WOW) < \bar{u}(WW);$

$|t| = 10.33, df = 124,\ p = 0.000.$

The observed differences are in the direction expected, but only in the case of Question 10 are they significant. Again we find a very strong preference for a process that suggests the active involvement of the individual in an area where norms are neither strong nor, one suspects, uniform.[10]

Do fair processes lead people to behave differently? In other areas, psychologists have found rather interesting links between fair treatment and subsequent behaviour, (Kim and Mauborgne, 1996). We devised two Questions to probe links between fair process and the behavioural intentions of actors in economic contexts. Question 11 examines the extent to which unfair treatment promotes a behavioural intention to take legal action in a health-care rationing problem, while Question 12 asked about intentions to patronize a shop having had different reactions to the return of a faulty good. In each case we focus on the politeness aspect of fair process in order to minimize the scope for different behaviour because of implied different probabilities of consequences. Question 12 is also designed to explore a secondary thesis, namely that judgements of unfairness may have impacts that are observed in the decision to interact, as well as in behaviour, once a player is already engaged in a game.

[10] It has been suggested that the significance of the responses is difficult to assess because there may be factors other than procedural fairness at work in distinguishing between fairness judgements regarding a written warning and a written warning combined with an oral one. This might be true, though the focus of my attention has been to identify robust fairness judgements over economic and social processes – I am interested in reasons for this judgements but only on secondary level – the point remains that economic theory has tended to ignore process issues completely and has treated issues of fairness as being distributive.

11 Jane has been denied access on the National Health Service to a certain drug on the grounds that it is prohibitively expensive (a year's treatment would cost £250,000). Her doctor has been very sympathetic but says there is nothing he can do to help. It is unlikely but not impossible that if she takes her Health Authority to court she might receive treatment for a year. If you were Jane, what is the chance you would take the Health Authority to court?

12 You take back to a shop for refund a toy that is faulty. It takes 15 minutes for the toy to be exchanged and the shop-keeper is apologetic. Assuming this is one of two similar toy-shops in town, what is the probability that you will go back to this shop when you next want to buy a toy?

Table 5: Unfair Treatment and Subsequent Behavioural Intentions

	VL[11]	*L*	*U*	*VU*	*Mean*	*Std Err*
Question 11						
Sympathetic (S)	5	16	24	13	2.776	0.13
Unsympathetic (U)	12	17	20	10	2.470	0.12
Question 12						
Apologetic (A)	19	27	13	2	1.967	0.10
No Apology (NA)	3	4	20	40	3.448	0.10

Question 11: $c^2 = 3.659,\ df = 3,\ p = 0.301.$ Ha: $\bar{u}(S) < \bar{u}(U)$; $|t| = 1.71, df = 113,\ p = 0.045.$

Question 12: $c^2 = 64.427,\ df = 3,\ p = 0.000.$ Ha: $\bar{u}(A) < \bar{u}(Na)$; $|t| = 10.33, df = 124,\ p = 0.000.$

In this final pair of Questions, we asked voters to respond in terms of the extent to which they were likely to take legal action, or return to the shop. The results are in the predicted directions and in three cases out of four, the statistical tests are significant. That an apology makes such a difference is reminiscent of the finding that cheap talk has an impact on outcomes in games, though here there is no possibility that the apology will serve as a co-ordinating device. Possibly respondents are reacting to the violation of a group norm which threatens other members of the group – in this case being rude is taken as a signal that other group members' rights might not be respected. Giving such a signal would, therefore, be costly and worth trying to avoid – agents who gave such strong signals despite the incentives not to are, at best, difficult to read and probably to be avoided. Some supporting evidence for such an argument can be found in an

[11] In this case, respondents were asked to indicate whether they thought going to court, or back to the shop, very likely, likely, unlikely or very unlikely.

interesting comparative study of trust in business relations by Burchell and Wilkinson (1996). In the UK, trust in business relations involves forgiveness of minor errors, though this is not so in Germany where such errors will more readily lead to the breakdown of a business relationship. One of the key difference between German and UK business relations is that the latter are more firmly embedded in a set of industry norms and this means that in Germany, a breach of contract is more likely to be also a violation of a group norm.

6 Concluding Remarks

Fairness has been of interest to economists for a long time. In macro contexts, the link to distribution has associated the idea with altruism, though recent theoretical and experimental work on game playing suggests a more complicated picture in which fairness and self-interest are often congruent. Our analysis of the reasons for sensitivity to fair process extends this line of argument and supports the view that, often, people have good reason to be 'morally productive'. This seems to be an insight which is more naturally phrased within game-theory than within neo-classical economics (this is *not* to say that it *cannot* be made within the neo-classical framework). Without summarizing, we highlight the key points and indicate the direction we should like this research to develop in future. First, we have added to the body of evidence showing that there is a strong lay resistance to the use of random choosing as a fair process. However, our suggestion that this is because randomization removes control (voice) from those involved seems to receive weak support. Reasons for objections remain puzzling and they might be explored more readily by looking for commonalities between the real economic institutions where randomization is used and/or acceptable (eg national lotteries and ballots for student accommodation). Having conducted the survey, our attention was drawn to two other earlier, similar results, Frey and Pommerehne (1993) and Bukszar and Knetsch (1994), and it is worth noting that this rejection of random choosing is consistent with a developing theme in behavioural decision theory that emphasizes the role of reasons in choice, Anand (1991) and Shafir, Simonson and Tversky (1993). Second, we showed that the processes which imply *involvement*, even through representatives, are strongly preferred to what might be called 'closed' choice mechanisms in which the decision problem is completely defined and the preferences are inferred by some indirect method. This message is becoming well understood by natural scientists but it seems it might also apply to the use of economic inputs into deliberative processes concerning policy. Third, we argued that a sense of due process has value in curtailing possible abuse of discretion within hierarchical groups (firms, families etc.) or between traders with different levels of power: our empirical evidence was entirely consistent with the claim. Fourth, we used a number of Questions to explore the claim that treatment showing less than appropriate regard for a person as an agent, is regarded as unfair. The statistical significance of the impact of an apology on likely behaviour is particularly large and it would be interesting to see if this phenomenon can be replicated in incentive-compatible conditions. One can reasonably speculate that it will. We might (minimally) regard an apology as a form of cheap talk and yet we know that people do leave money on the table in, for example, ultimatum games, whether they are played nominally, or for hard cash.

Though the experiments were not designed to test or estimate an econometric model of procedural fairness, one can see the beginnings of such a model from these results. It might look something like:

PF = f (V, O, VxO, PeFxPD, PI, PixO, PCxC)

where PF = judgements of procedural fairness, V = voice, O = Outcome, PeF = Persuasive Force, PI=Personal Identification (closeness to a person's agency – 'don't take it personally'), PC = Personal Contact and C = Feasibility of Personal Contact.

This functional representation uses interaction terms to represent what experimental psychologists would call 'mediation effects'. So, for example, the evidence presented here is consistent with the view that the role of voice or involvement is a function of whether the outcomes are positive or negative. It is worth noting that the outcome seems to interact with a range of independent variables. In some cases, such as the role of persuasive force on procedural fairness, the effect may be (almost) completely dependent on power differentials. In this case, we might observe a significant interaction term without finding significant lower order terms. In the final case, personal contact and/or involvement is obviously what matters to people but, equally obviously, acceptability is dependent on context. In this case I think we can surmise that an important aspect of the context will be the cost of personal involvement. Managing directors of global businesses cannot be expected (e-mail notwithstanding) to communicate with employees in the same way as directors of small business, even on similar issues.

To date, Sen (1993) has been the most prominent and articulate advocate of the theoretical position that outcomes aren't all that matter for economic welfare (see also, forthcoming, Atkinson on this). This paper provides empirical support for that view and suggests that process values may be found not just in issues to do with personal autonomy and freedom but also in the need to resolve certain elementary and universal forms of social conflict. Equality of opportunity is perhaps the most obvious practical implementation of procedural (non-outcome) fairness but the evidence here gives reason to doubt such a purely meritocratic view of the world – outcomes seem to matter too. In any case, this paper has only begun to scratch the surface: Questions of theoretical formulation, behavioural evidence of impacts and policy implications seem large and invite further exploration.

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Appendix

The Questionnaire was sent to 650 voters selected at random from an electoral ward in Abingdon, Oxfordshire known to cover a diverse set of socio-demographic conditions. Mailings were conducted in June and September 1998 and the returns indicated a usable sample of 130 out of an effective total of 647 (allowing for sender gone away and inadvertent duplicate mailings).

The average age of respondents is 49.42 years ranging from 19 to 88. The inter-quartile range is from 36 to 61.75 years. 54.76 % of respondents were female, 42.86% of respondents were male, (rest unknown). Distribution of personal incomes is as below:

Income Range	% of sample
up to £5000	17.46
£5000 to £10000	11.90
£10000 to £20000	28.57
£20000 plus	36.51
undeclared	5.56

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