An alternative Benthamite argument

Abstract

In this part, I consider a Benthamite argument for democracy in terms of equal shares of voting power. I reconstruct this argument and adapt it to my purposes (for direct democracy). I also provide an overview of various democratic decision methods and discuss three interpretations of 'voting power': actual, probable, and potential voting power. I argue that one of them – potential voting power according to the Penrose index – fits best with the Benthamite argument. There is also a discussion about the notion of equality, which is central for much of democratic theory but can be spelled out in a number of ways.

1 Introduction

In this part, I consider an alternative Benthamite argument for democracy. In section 2, I reconstruct this argument and adapt it to my purposes (for democracy as a decision procedure). Section 3 gives us an overview of various democratic decision methods. In section 4, I discuss three interpretations of 'voting power': actual, probable, and potential voting power. I argue that one of them – potential voting power according to the Penrose index – fits best with the Benthamite argument. Section 5 discusses the notion of equality, which is central for much of democratic theory but can be spelled out in a number of ways. Finally, in section 6 I need to reassess the various democratic decision methods in the light of the previous discussions.

2 Bentham on democracy

From Bentham (1973[1820]) we can gather a similar but distinct utilitarian argument for the thesis that the best form of government is democracy.[1] The scope of Bentham's argument is

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[1] James Mill's (1992[1820]:sec.I–IV) utilitarian argument for democracy is in all relevant aspects (concerning premises, argumentative structure, and conclusion) quite similar to Bentham's. I therefore consider my analysis to be equally relevant for Mill's idea; in fact, we could more generally talk about a classical utilitarian argument for democracy. Mill's thesis is twofold: (i) government is necessary and (ii) democracy is the best form of government. Part (i) is supported by a proposition which refers to the "grand governing law of human nature" (1992[1820]:11):

> (a) without governmental control, stronger, more powerful individuals will take what they desire of weaker individuals' possessions

(together with the underlying premise that such actions will diminish the sum total of happiness for all). In turn, (a) is supported by the already stated assumption that

> (b) each individual seeks to maximise her own happiness (by all means available, we may add).

Part (ii) of Mill's thesis is argued for by stating that

> (c) the purpose of government is to ensure the greatest happiness of the greatest number by distributing the "scanty materials of happiness" in such a way that this purpose is fulfilled, and by preventing any individual from interfering with this distribution (1992[1820]:5) (The "scanty materials" are "the objects of desire, and even the means of subsistence [which to a large part]

somewhat lager than required for my purpose: for Bentham, it concerns representative democracy as a form of government for a nation state. In fact, Bentham explicitly settles for indirect, representative democracy (1973:296) since he deems direct democracy on a nation state scale impossible (reference still missing).

However, I will start my analysis of the argument by limiting its scope to democracy as a decision procedure; the reader should therefore keep in mind that I interpret the term 'government' in the argument as simply referring to 'collective decision making'. This move is necessary in order to render the argument useful for my purpose; the move seems to me justified since it simplifies the argument without necessarily compromising its original degree of validity. Yet, I will acknowledge my departure from Bentham's ideas by calling the argument 'Benthamite', instead of 'Bentham's'. Once I have managed to present the most plausible version of the argument under this limited scope, a subsequent question would be how it could be extended in order to fit Bentham's original scope; however, this further question I will have to discuss elsewhere.

2.1 A reconstruction of the argument

The Benthamite utilitarian argument can be reconstructed as follows:

> (a) the best form of government is the one that is most conducive to the proper end of government,
>
> (b) the proper end of government is "the greatest happiness of the greatest number" (I shall understand this to mean 'happiness maximisation'),
>
> and

> are the product of labour"; hence it is the end of government to ensure "to every man the greatest possible quantity of the produce of his labour", Mill 1992[1820]:5),
> and
> (d) democracy fulfils this purpose better than aristocracy or monarchy.

Mill's arguments for (d) remind of Bentham's:

> (e) what applies to individuals on their own, also applies to individuals within groups, hence (a) can be restated for those constituting government, i.e. those being given governmental power: individuals with governmental power will take what they desire of those individuals' possessions who do not possess governmental power,
> and
> (f) within a democracy, the ratio of individuals with governmental power to those without is the highest (as compared to aristocracy or monarchy).

Mill's argument is far clearer than Bentham's in giving democracy a protective function, but essentially, they both have the same premises, argumentative structure, and conclusion. Especially since even Mill relies on the premise that individuals are self-interested maximisers, and that a group of individuals cannot act from "sinister" interests, i.e. have an interest opposite to its interests (whereas one group – aristocrats, a monarch – can do so against another), I consider my arguments concerning Bentham's idea to be equally relevant for Mill's idea.

(c) democracy is the form of government most conducive to the greatest happiness of the greatest number. (1973:295f)[2]

Conjunctively, these three claims establish Bentham's thesis. Claim (a) seems reasonable, even more so if we restate it as a conditional: provided there is such a thing as a proper end of government, the best form of government surely must be the one that is most conducive to this end. Claim (b) states that there indeed is such an end: maximisation of the sum total of happiness; this is quite uncontroversial within utilitarian thought. However, (c) obviously needs some support, to which the following line of argument can be reconstructed:

(d) "the actual end of [a democratic form of] government" is the "greatest happiness of the greatest number", i.e. democracy is "the form [of government] most conducive to the proper end of government" as compared to the other forms of government: monarchy, aristocracy and mixed forms (1973:295f.),

since

(e) the actual end of governments is "the greatest happiness of those among whom the powers of government are shared" (1973:296),[3]

and (here we have to construct a reasonable premise)

(f) democracy is the form of government in which the greatest possible number of individuals share power as compared to the other forms of government.

Claim (e) is in need of support, which is given by an assumption underlying much of Bentham's utilitarian thought:

(g) "the actual end actually pursued by man in general" is his own greatest happiness (1973:295).[4]

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[2] The "net amount" of happiness produced by government, in Bentham's terms, is what remains of the overall produced happiness (through aiming at the four specific ends "subsistence, abundance, security, and equality", each of which ought to be maximized) after deduction of the overall produced unhappiness (which constitutes the necessary "*expense* of government": punishment and hardship, which ought to be minimized) (1843:a sec.1).

[3] For a short account on how Bentham came to embrace democracy for utilitarian reasons, mainly based on his insight coined in claim (e), see e.g. Hart (1982:53ff; especially pp.68f.). For longer accounts on "sinister" and universal interests pervading different forms of government, see e.g. Bentham (1843:b:vol.3, sec.IV).

[4] Bentham elsewhere defends his ultimate reliance on this cornerstone in the following way: "That principle of action is most to be depended upon, whose influence is most powerful, most constant, most uniform, most lasting, and most general among mankind. Personal interest is that principle: a system of economy built on any other foundation, is built upon quicksand." (1954:433.) In yet another paper, Bentham defends this principle as the necessary and ultimately beneficial spring of human action: "The general predominance of personal interest over every other interest—over every other force that can be applied to the human mind—is a principle not only not capable of being done away, but which for the good of mankind there exists no sufficient reason for endeavouring, for wishing, to do away: since it is upon this general predominance that (when the matter is maturely considered) the continuance of the whole species—of every individual belonging to it, will be found to depend." (1843:c:ch.XXIX.)

Claim (f) might seem uncontroversial at first sight, if we simply accept Bentham's intuitive idea that that democracy (as government or collective decision-making "of the many") provides a larger number of people with power (presumably: over the decision) than either aristocracy (government "of the few") or monarchy ("government of one" 1973:295). But an accurate assessment of the argument is difficult, since it employs both vague (just how many are "many" or "a few") and ambiguous (just exactly how do these governments work?) notions of government. Thus, the competing candidates for government might be specified in a number of ways; in order to get a grip on the argument, we need to know which specifications should be considered.

For my purposes, we need not bother with specifying any candidates which the "best" form of government should be compared to, since the argument can be restated in non-comparative terms. Hence, specifications of aristocracy or monarchy need to be considered only if they seem to be promising candidates for the "best" form of government. The question here is solely: which specification(s) of government can make the argument work, i.e. describe the *best* form(s) of government (irrespectively of which other forms there might exist)? If we find any such specification(s), we can then baptize them (different kinds of) 'democracy', thus making the Benthamite argument work. So, what is needed to evaluate claim (f)'s tenability, and thereby claim (e)'s relevance for the argument, is a more thorough discussion of possible competitors for the title of 'democracy'.

3 The competitors: a variety of democratic decision rules

In order to choose suitable competitors, we need to look at the conditions they are supposed to satisfy: the basic idea according to claim (f) is that they should amount to 'the greatest possible number of individuals sharing power'. 'The greatest possible number of individuals' is a question of straightforward measurement within a given group;[5] the result of which will depend on our interpretation of 'sharing power'. So one question is how we should understand 'power' in this context, the other what idea of 'sharing' we should assume, i.e. how power should be distributed.

[5] Note that, since I avoid discussing the question of the proper scope of the demos of democratic decision making, I will here for simplicity's sake assume that there is a fixed group within which some decision is to be collectively taken.

As to the first question, it should be uncontroversial to opt for the general idea of ‘power over a decision’ or ‘voting power’, given that I want to set up the argument for the limited scope of ‘democracy’ as a decision procedure. As to the second question, we can start out by preliminarily accepting an intuitively plausible “presumption of equality”, which “requires that everyone, regardless of differences, should get an equal share in the distribution unless certain types of differences are relevant and justify, through universally acceptable reasons, unequal distribution” (Gosepath 2007:§2.4). The answers to both questions are of course preliminary and vague; specifying and altering them in the course of this chapter might prove necessary for improving the argument’s validity.

One obvious candidate that satisfies our condition of an equal distribution of voting power is *majority rule with equal vote*. For this candidate, it could be argued that claim (f) is established by the following claims in conjunction:

> (h) the given form of democracy supplies all individuals within the given group with the same number of votes,
>
> (i) ‘power’ (as ‘voting power’) is to be identified with ‘votes’,
>
> and
>
> (j) ‘sharing’ is to be understood in egalitarian terms.

There are a number of possible ideas of what it means to vote, i.e. what kinds of acts constitute voting (e.g. ticking a box on a sheet of paper, pressing a button on an election machine, raising one’s arm, shouting out loud, and the like) and hence what it means to supply individuals with votes (i.e. resources or opportunities that allow individuals to perform the act of voting); however, the differences between those ideas are not relevant for this discussion. What is relevant here are the procedures of (1) weighting voting power (for our first candidate, voting power is weighted equally and identified with votes), and of (2) aggregating votes, i.e. the results of individual voting actions, and identifying the outcome with the alternative that satisfies certain conditions (for our first candidate, these conditions are given by simple majority rule, selecting the alternative that gets more than half of all votes). Both procedures might be specified in a number of different ways – thus generating more competitors for my purpose.

Regarding procedure (1), it has been suggested that votes (as voting power) should be weighted not equally, but proportional to some relevant factor, e.g. to the amount of what is “at stake” for each individual, concerning the possible outcomes of the decision (Brighouse &

Fleurbaye 2005). Other suggestions have been that votes should be weighted proportional to individuals' wealth (Aristotle) or education or competence (Mill 2001 [1860]).[6] We might even imagine other factors which could be considered as relevant differences that justify, "through universally acceptable reasons", a prima facie unequal distribution of votes. Hence, some competitors for taking the place of 'best government' in the Benthamite argument might well employ the idea of *weighted votes* (according to some relevant factor). Yet, since even the assumption that votes correspond to voting power is a preliminary, we should not preclude the idea that some of our competitors might employ other ideas of *equal* or *weighted voting power* (according to some relevant factor).

Regarding procedure (2), there are various ways to aggregate votes and identify a winner (some of those presuppose decisions with more than two alternatives; all of them are single winner methods).[7] Even if we stick to the majority principle, there are numerous different ideas besides the *simple majority rule*, which selects that alternative as the winner that got more than half the votes: the principle of *qualified majority*, which raises the bar to e.g. two-thirds majority or even unanimous consent; the principle of *relative majority*, also called plurality rule or "first-past the post", which selects that alternative as the winner that got most votes, even if it got les than half the votes.

Moreover, there are various other methods, such as the *top-two runoff* principle, that nominates the two top candidates from a first round for a decisive second round; the *elimination runoff* principle, which eliminates the weakest candidates one by one until there is a majority decision; the *exhaustive runoff* principle, which simply repeats decisions until there is a majority; and neither last (we could think of various others) nor least, the *random ballot* principle, which can work as a lottery either of votes, where all votes are "aggregated" and one vote is randomly picked as the winner, or of dictatorship, where one individual is randomly picked to decides the outcome. (The random dictatorship principle can easily be transformed into a *rotating dictatorship principle*, where the "dictator" for each decision is picked according to some rule of rotation instead.)

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[6] More on these ideas and on the notions of 'equality' and 'proportionality' in section 2.4.
[7] For an overview of the following and other voting methods, visit Wikipedia's entry on "Voting systems" (Wikipedia contributors 2007). Cf. even Saunders (2007) and Mackie (2003).

In addition to these voting methods, there are numerous ideas how votes can be used. The *Borda count* allows each voter to order all alternatives of the decision; the alternatives are then weighted in proportion to their position on the individual list (e.g., given *n* alternatives, weighting all first-position alternatives *n-1* times, all second-position alternatives *n-2* times, and so forth, with the last-position alternatives being weighted *n-n* times, i.e. *0*), followed by straightforward aggregation of the weights for each alternative, and identification of the outcome according to simple majority rule (picking the alternative that received most weights). The *Condorcet method* departs, just as the *Borda count*, from individual lists ranking all the alternatives, but then runs pair-wise competitions that are won according to simple majority rule; the ultimate winner is that alternative which beats all the other alternatives in these pair-wise competitions. For *cumulative voting*, a number of votes are assigned to voters (equally or proportional to some relevant property) who place different amounts of their share on any number of alternatives.

The combination of these ideas for the two different procedures gives us quite a handful of competitors for the best form of government. In order to assess the competitors strengths and weaknesses, the argument's notions 'power' and 'sharing' have to be evaluated in detail. In the following two sections, I will explore how they can and, in order to make the argument work, should be interpreted. In section 2.5, I will return to the competitors and determine how they fare according to these interpretations.

4 How to specify 'voting power'

Let us start with the notion of power. Is it plausible to identify 'power' with 'votes' – or more specifically, since we here are concerned with collective decision procedures, 'voting power' with 'votes in a decision'? In order to answer this question, one would have to know how voting power should be interpreted. The most common interpretation is that having power over a decision means having the ability to change the outcome, at least in some scenarios; this ability is in turn often operationalized by the notion of decisiveness:

> An individual is decisive in a certain vote iff the decision would change if she, but no one else, changes her ranking [i.e. her vote]. (Arrhenius 2007:5.) [8]

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[8] For similar ideas on voting power and decisiveness, see Brams, who defines individuals' voting power "as measured by their pivotalness or criticalness in winning coalitions" (2008:129); and Morriss, who states that "configurations [of votes] in which your vote is decisive are the conditions in which you have power" (1987:157). Cf. even Dahl's measure of an individual's "*amount of power*", which subtracts p_2, the probability that an outcome is brought about even when the individual votes against it, from p_1, the probability that an

For illustration, assume that a group of three individuals, i_1, i_2 and i_3, were to make a collective decision on two alternatives, *a* and *b*, and assume further that i_1 and i_2 both vote for *a*, whereas i_3 votes for *b*; the outcome with equal vote and simple majority rule being *a*. In this scenario, according to the general idea above, i_1 and i_2 would be decisive respectively, given an unchanged vote of the other two individuals (it would be sufficient for either one to change her vote to *b* for the outcome to change to *b*), whereas i_3 would not be decisive, given an unchanged vote of the other two (if i_3 changed her vote to *a*, the outcome would still be *a*).

Arrhenius (2007) distinguishes three categories of voting power, departing from different specifications of decisiveness: actual, probable, and potential voting power.[9] These will be discussed in the three subsections below.

4.1 Actual voting power

Actual voting power is measured by the fact whether the individual voter is actually decisive or not – which is *1* or *0* for each single decision. Applied to the above case, which we can call C_1, this measure assigns an actual voting power of *1* to i_1 and i_2 respectively, whereas i_3's actual voting power is *0*.

4.2 Probable voting power

Probable voting power is measured by the "probability that [the] individual will be decisive [which] depends on the probability of the other voters voting one way or the other" (Arrhenius 2007:9).[10] Imagine case C_2, similar to C_1, except that the probability for i_3 voting for either *a* or *b* is 0.2 and 0.8 respectively, and the probability for i_2 voting for either *a* or *b* is 0.8 and 0.2 respectively, hence, i_1 has a 0.68 probability of being decisive: the probability for i_2 and i_3 voting for *a* and *b* respectively is 0.04, the probability for i_2 and i_3 voting for *b* and *a* respectively is 0.64; these being the only scenarios where i_1 can be decisive (where the other

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outcome is brought about when the individual votes for it, which amounts to a measure of this individual's decisiveness (1957:205). (This claim presupposes a translation of Dahl's account of 'power *over* someone' into a more general and plausible account of 'power *to* effect something'; for an illuminating discussion of this topic, see Morriss 1987:32ff.)

[9] Note that I do not follow Arrhenius' usage of 'power' and 'influence' as synonyms.

[10] The kind of probability at play here should be an objective, e.g. frequentist notion (inferring probability values from "*the relative frequency of actual occurrences*"), or a propensity notion (probability values as "propensities to produce a particular result on a specific occasion"), since a subjective notion (as "degrees of belief") could provide different results for individuals with different belief systems (Hájek 2007; cf. even Resnik 1987). However, probable voting power aims at a unique and definite result for all individuals, I surmise.

two vote against each other), summing up their probabilities gives us a probability of 0.68 for i_1 to be decisive. For calculating i_2's and i_3's voting power in the same setting, let us then assume that the probability for i_1 voting for either *a* or *b* is 0.5 respectively; this then gives both i_2 and i_3 a 0.5 probability of being decisive. Thus in C_2, i_1 has more probable voting power than either i_2 or i_3, which is explained by the fact that the probability of i_2 and i_3 voting against each other is relatively high.[11]

4.3 Potential voting power

Arrhenius suggests that potential voting power should be "measured by the possible number of times [the individual] can be decisive divided by the total number of times individuals are decisive" (2007:5). Imagine case C_3, where once again i_1, i_2 and i_3 can vote for either *a* or *b*. There are then 8 possible combinations of votes and outcomes, as depicted in table 1, and each individual is decisive in four of them (marked by bold letters); thus, the total number of times individuals are decisive is twelve, which gives each individual a potential voting power of 4/12 , i.e. 1/3.

i_1	a	**a**	**a**	a	b	**b**	**b**	b
i_2	a	**a**	b	**b**	**a**	a	**b**	b
i_3	a	b	**a**	**b**	**a**	**b**	a	b
outcome	a	a	a	b	a	b	b	b

Table 1: C_3

Arrhenius notes that this measure is a "generalisation of Banzhaf" (2007:5). The Banzhaf measure has been criticized by Morriss as being "simply a less informative version of Penrose's index", which is why it "should be banished" (1987:166). For the Penrose index, we also count for each individual the possible number of times she can be decisive, but divide this number by the total number of possible combinations of votes and outcomes (in C_3, this amounts to 4/8, i.e. 1/2 for each individual). The resulting figures are then stated as a ratio for the entire group, which is the Penrose index (in C_3 thus: 1/2 : 1/2 : 1/2:). In fact, the Banzhaf index just multiplies these figures with the appropriate constant, so that all the figures combined sum up to *1*, i.e., it "expresses [the Penrose] ratio as a fraction – but not a fraction *of* anything" (ibid.).

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[11] This measure actually coincides with Dahl's measure of an individual's "*amount of power*" (1957:205), cf. footnote 9 above.

Morriss points out the following problem with the Banzhaf index: since it is only concerned with equality of voting power, it is silent on comparisons between cases where power is redistributed by levelling-down, i.e. decreasing the total amount of voting power (1987:184f.). Let me illustrate this with a comparison of the following two cases, C_4, as depicted in table 2, and C_5, as depicted in table 3. In C_4, we have a weighted vote distribution: i_1 has 3 votes, i_2 has 2 votes, and i_3 1 vote. The outcome is determined by simple majority rule, with the default outcome *a* in case of a tie. In C_5, the decision rule is changed to unanimous rule, with the default outcome *a* in case of a tie. (The vote distribution can be maintained from C_4, but actually becomes irrelevant for this decision rule.)

i_1 (3 votes)	a	**a**	**a**	**a**	b	**b**	**b**	**b**
i_2 (2 votes)	a	a	b	b	**a**	a	**b**	b
i_3 (1 vote)	a	b	a	b	**a**	**b**	a	b
outcome	a	a	a	a	a	b	b	b

Table 2: C_4

i_1 (3 votes)	a	a	a	**a**	b	b	b	**b**
i_2 (2 votes)	a	a	b	b	a	**a**	b	**b**
i_3 (1 vote)	a	b	a	b	a	b	**a**	**b**
outcome	a	a	a	a	a	a	a	b

Table 3: C_5

In C_4, the Penrose index for i_1:i_2:i_3 is 6/8 : 2/8 : 2/8, whereas the Banzhaf index is 6/10 : 2/10 : 2/10. In C_5, the Penrose index is instead 2/8 : 2/8 : 2/8, whereas the Banzhaf index is 2/6 : 2/6 : 2/6.[12] Thus, a comparison of the two Banzhaf indices seems to suggests that while i_1 loses voting power, i_2 and i_3 actually *gain* voting power (from 2/10 to 2/6), if we switch decision rules from majority rule to unanimous rule. However, the Penrose index can set this comparison straight by showing that, surely, i_1 loses some voting power, but *no one gains* any voting power: the number of times that i_2 and i_3 can be decisive is actually the same. The only "redistribution" of voting power consists in "levelling-down" the number of times that i_1 can be decisive is to match the others.[13]

The upshot of Morriss' argument is that, if we want to compare different decision situation with regard to not only equality but also efficiency of the distribution of voting power, we should stick to the Penrose index. Hitherto I have not considered efficiency as a condition for

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[12] In order to facilitate for the reader to identify the numbers in these fractions with the data given in the tables, I refrain from simplifying the fractions.

[13] Arrhenius also notes this, and concludes: "The majority principle thus gives people a *greater total* of potential influence [i.e. potential voting power] as compared to the unanimity principle." (2007:8, my emphasis.) However, this is a peculiar way of speaking, since Arrhenius defines potential influence along the lines of the Banzhaf index, the distinctive idea of which is that its figures for each case sum up to *1*; this means that the amount total of potential voting power is equal for all cases. In order to be able to speak of a *greater total* of potential voting power in the first place, one has to replace the Banzhaf notion of potential voting power with some other notion that lends itself to this way of speaking, e.g. the Penrose notion.

the proper distribution of voting power, and it might turn out that there is no room for it in the Benthamite argument. But nothing is lost (for comparisons of equality) by replacing the Banzhaf index with the Penrose one – and something might be gained (if efficiency should turn out to be relevant). For this reason, my interpretation of potential voting power shall be the following: potential voting power is measured by the possible number of times the individual can be decisive divided by the total number of possible combinations of votes and outcomes.

4.4 The best interpretation of 'voting power'

Which one of these three accounts of 'voting power' should be referred to in defining 'power' for the Benthamite argument? In themselves, all three might be usable descriptive notions, but we have to keep in mind that they for the argument are supposed to figure in prescriptive claims concerning some proper distribution. In this respect, clearly, actual voting power is an unpromising candidate, since its distribution (egalitarian or not) for each individual depends on the actual votes of the other individuals.

Consider again case C_1: i_1 and i_2 have an actual voting power of *1* each, whereas i_3 has *0*. If we would want to furnish all three individuals with, say, an equal amount of voting power, this would now prove impossible: in order for i_3 to also be *actually* decisive in C_1, i.e. as actually decisive as i_1 and i_2, she would have to be supplied with a greater amount (or weight) of votes than the other two combined. E.g., if i_1 and i_2 have one vote each, it is necessary to give i_3 3 votes – but then, i_1 and i_2 would have an actual voting power of 0. Any attempt to even out this inequality of voting power would just bring us one step further up an infinite spiral with no equilibrium level of equal voting power. The upshot is that it is not possible to construct a single collective decision where everyone has an *equal* amount of actual voting power, regardless of which voting method (any kind of majority rule, runoff principle or random ballot principle) is employed. (Note, however, that it would be possible to construct a *sequence* of collective decisions where everyone has an equal amount of actual voting power *in total* – this is the leading idea of the rotating dictatorship principle. I will address this idea in section 2.5 below in order to show why it does not work for the Benthamite argument.)

On the other hand, there might sometimes be reasons for some specific "unequal", weighted distribution of voting power. It is possible to construct a collective decision where actual voting power corresponds to our demands on the specific distribution as given by those reasons. (E.g., assume that there are reasons in C_1 for not granting i_3 any actual voting power while giving i_1 and i_2 full actual voting power.) However, such correspondence would be contingent on the facts of how all the individuals in this decision vote, and such facts should not be relevant for how any proper distribution is implemented. Moreover, given these facts, some specific, reason-supported distributions would still prove impossible (e.g. if there were reasons in C_1 for granting i_1 with zero, and i_2 and i_3 with full voting power – surely, we could simply refuse to give i_1 any vote at all, but this would then just throw us back to the initial, insolvable problem of granting equal actual voting power to i_2 and i_3).

Even probable voting power seems problematic for similar reasons: here, any distribution of voting power would for each individual depend on the – equally contingent and arguably irrelevant – probabilities of the other individuals' votes. In order to counter this objection, it could be suggested that the problem disappears if we assign equal probabilities to each voter's likeliness to vote for each of the alternatives, e.g. as a default position in case of uncertainty. But in this case, the results for probable voting power actually coincide with the results for potential voting power as defined above. For illustration, return to case C_2, but now just assume that i_1, i_2 and i_3 each have a 0.5 probability of voting for either *a* or *b*; each of them then has a probable voting power of 0.5 (e.g. i_1 is decisive only if either i_2 votes for *a* and i_3 for *b*, the probability of which amounts to 0.25, or i_2 votes for *b* and i_3 for *a*, the probability of which also amounts to 0.25). This is equivalent to the measure of potential voting power (calculated as in C_3, see above).[14] Thus, even if the retreat to assigning equal probabilities does solve the above problem (of basing the distribution of voting power on contingent, irrelevant facts) for probable voting power, it also risks rendering this notion superfluous.

However, another objection to this problem could be made: the problem only appears for the different kinds of majority and runoff voting methods – but not for the random ballot principle. If the outcome of a collective decision is decided by drawing one vote from a lottery urn or randomly selecting a dictator, then each participant's probability of being decisive does not depend on how the others actually vote or are likely to vote (let us for simplicity assume that all individuals use their votes), but only on the probability of her vote being drawn from the urn of her being selected as a dictator. For weighted votes, this

[14] Note that I have not yet found, or produced, any proof of the assumption that probable voting power with equal probabilities necessarily coincides with potential voting power, so my argument is not yet complete.

probability equals the number of votes assigned to the individual, divided by the total number of votes. For equal (equally weighted) votes, this measure assigns an equal probability of being decisive to each participant.

Let us lastly consider potential voting power. This account is in itself not dependent on contingent facts, since it takes into consideration *all possible* combinations of individual votes and resulting outcomes (given a fixed group, set of alternatives and decision method). This seems to be a workable notion for all our competitors. For democracy as majority rule with equal vote, the account "passes the intuitive test" of assigning to every participant in the collective decision an equal amount of voting power (Arrhenius 2007:6).

This leaves us with two interpretations of voting power that can be used for our purposes of finding a proper distribution that fits the Benthamite argument: probable voting power, which can be employed for random ballot methods, and potential voting power, which can be employed for all voting methods. Note, however, that for random ballot methods, the results of probable voting power necessarily coincide with the results of potential voting power: the latter notion is calculated, as we recall, by dividing the possible number of times the individual can be decisive (which is equivalent to the amount of votes the individual cast into the urn) with the total number of possible combinations of votes and outcomes (which is just equivalent to the total amount of votes in the urn). Thus, anything we want to say, as to the proper distribution of voting power, can be said by referring to the notion of potential voting power. For this reason, and for the sake of simplicity, I propose that we abandon the notion of probable voting power and work only with potential voting power.

It might be objected that in some cases, we should be able to refer to probable voting power in order to illuminate problems related to voting power that cannot be grasped by potential voting power. Consider case C_6, where i_1, i_2 and i_3 take a sequence of collective decisions on two alternatives, *a* and *b*; the participants have equal votes, and the outcome is determined by simple majority. Suppose now that, as a matter of fact, i_2 and i_3 have decided always to vote together, thereby ensuring that i_1:s probable voting power for all decisions is 0 (since the probability of i_2 and i_3 voting against each other, which is the only setting for i_1 to be decisive, is 0). Yet, according to our measure of potential voting power, they all have equal voting power (viz., 1/2). The gist of this objection is that abandoning the notion of probable voting power makes it impossible to assess the distribution of voting power properly in cases like C_6.

My answer to this objection is that while such assessments clearly are important for some purposes, they are of no relevance for the Benthamite argument: the solution to cases like C_6 is not the redistribution of probable voting power which ensures equal voting power to all, given their cooperating and voting tendencies. This is just to say that we should find other solutions for the problem of permanent majorities (if it should turn out to be a problem for the Benthamite argument – I will return to this question in section 2.5 below) than prescribing some more proper distribution of voting power. The reason is, once again, that such a prescription would allow contingent, irrelevant facts to determine the proper distribution of voting power.[15]

For this reason, I propose that for our purposes it suffices to stick to potential voting power for all voting methods. Before our final examination of all proposed competitors for the title of 'best government' by the lights of the Benthamite argument, we need to turn our attention to our above proposition (j), which claims that "sharing" (of power) is to be understood in egalitarian terms.

5 Equality – in proportion to what?

Equality appears to be a basic element in democratic theory, sometimes concerning the relation between voters or the outcome of democratic decisions (e.g. with respect to the relation between voters or the distribution of some good), but most commonly, the claim to equality concerns the distribution of votes, as summarized in the common-sense slogan "one person, one vote". (References still missing, check e.g. Kymlicka's 2001, Singer 1973, Waldron 1999, Christiano 2004, etc.) But surely, what gives this slogan its intuitive appeal is not number or even the equality of votes, but the underlying idea of giving everyone an equal say in, or an equal opportunity to decide a decision. I thus surmise that it should be save to

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[15] Cases like C_6 have to be distinguished from cases like the popular reference case of the EC Council of Ministers, which distributed voting weights in some proportion to the participating countries sizes, assigning four votes each to Germany, Italy and France, two each to the Netherlands and Belgium, and one to Luxembourg between 1958 and 1975. These voting weights, in combination with qualified majority rule, also ensured that Luxembourg never was decisive in any decisions. (Cf. Arrhenius 2007:7.) However, in this latter case, Luxembourg's non-decisiveness was due not to contingent facts of the other countries cooperating or voting tendencies, but to the set-up of the voting rules (voting weights and qualified majority rule) themselves. The problem can thus be made visible with the measure of potential voting power: Luxembourg has *0* (potential) voting power. The remedy is that *voting power* (not voting weights) be distributed in proportion to the participating countries sizes. The upshot of this argument is that, for Luxembourg cases (unlike for cases such as C_6) the notion of potential voting power can be used both for describing the problem, and for prescribing a more proper distribution of voting power.

reinterpret the slogan as saying “equal voting power to each individual” (for majority rule with equal vote, the distributive patterns of votes and voting power coincide, as we just saw).

However, the tendency to jump from the claim to equality to this common-sense slogan obfuscates the need for a crucial question: in what respect should the distribution of voting power amount to an equal one? Assigning an equal amount to each individual is but one possible answer to this question; it can be restated as giving *equal* consideration to bodies or souls or personhood, or whatever it is that we take to mark each individual as one and only one, resulting in a distribution of voting power which is *proportional* to this feature.

However, even other ideas have been stated, as to what it is we should give equal consideration. Aristotle, for instance, proposed equal consideration of wealth (possibly as a indicator of merit or stakes), which results in assigning votes in proportion to property (*Politics* VI iii 1318a11-18b5; check!). John Stuart Mill proposed equal consideration of qualification, thus assigning more votes in proportion to individuals’ degree of education or talent or inherited intelligence or such, with a

> higher figure being assigned to the suffrages of those whose opinion is entitled to greater weight […] on the ground of greater capacity for the management of the joint interests (2001 [1860]:170).

More recently, yet another idea has been presented by Harry Brighouse and Marc Fleurbaey, which requires equal consideration of the individuals’ stakes in a decision: the more is at stake for an individual (however these stakes are defined), the more voting power she merits. Brighouse and Fleurbaey call this the “principle of *proportionality*” (2005:2) – but it can easily be seen (given my descriptions) that it does not differ at all from the former two ideas in involving a proportional distribution. Rather, all these ideas differ in specifying the relevant feature *in relation to which* the distribution of voting power should be proportional. All thus have the same egalitarian core in aiming to pay equal consideration to some relevant feature, which results in a distribution of voting power which is proportional to this feature.

How are we to choose among these different ideas? I believe that any such choice can only be justified from the larger argument surrounding claim (j) that ‘sharing’ is to be understood in egalitarian terms. Indeed, it can be shown that within the utilitarian premises of the Benthamite argument, there is a case for the latter version of equal distribution of voting power, i.e. Brighouse and Fleurbaey’s idea of proportionality to stakes.

Consider case C_7 where, once again, i_1, i_2 and i_3 choose between alternatives *a* and *b*. Assume now that, while i_1 and i_2 would derive a gain of one utile (the unit for measuring happiness) each if *b* were chosen over *a* (compared to none otherwise), i_3 would gain 3 utiles if *a* were chosen over *b* (compared to none otherwise). Given that all three know about their prospective gains, and given Bentham's assumption that "the actual end actually pursued by man in general" is his own greatest happiness 1973[1820]:295, they cast their votes so that the result through simple majority rule and equal voting power (equal votes) is *b* – which clearly is suboptimal regarding the total amount of happiness: 2 utiles are gained where a gain of 3 had been possible. This is not just the problem of oppressive majorities restated, but makes a case against the principle of equal consideration of individuals within our utilitarian argument (cf. Fleurbaey 2007:14). If we want to make the argument work, we will have to find a candidate which guarantees better results as compared to the proper end of collective decision making ("government"): maximisation of the sum total of happiness.

An intuitively reasonable candidate is of course Brighouse and Fleurbaey's principle of equal consideration of stakes, if each individual's stakes are defined as the difference in utility between the best and the worst possible outcome for her (given the alternatives), and if the distribution of potential voting power is determined proportional to the distribution of stakes across the group. As Fleurbaey (2007:4) shows, it can be proved that

> [i]f the weights [of each vote] are proportional to [the difference in utility for the individual], the weighted majority rule selects the decision which yields the greater sum of utilities. (Fleurbaey 2007:4)[16]

To illustrate this claim, let us return to case C_7, but assume that the simple majority rule with equal voting power is replaced by simple majority rule with voting power proportional to stakes (what Fleurbaey calls "the weighted majority rule"), with the default outcome *a*, in case of a tie. This means that i_3, for whom a gain of three utiles is at stake, gets three times the

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[16] Note that Fleurbaey characterises the "weighed majority rule" as a decision method "in which each voter has a certain number of *votes*" (2007:2, my emphasis) proportional to her stakes, whereas I continue to refer to "(potential) voting power" as defined above. The reason is that it can be shown that a proper distribution of numbers of votes, as justified by the stakes involved (with a default outcome in case of ties), can result in an improper distribution of potential voting power, i.e. one that is not justified by those stakes (cf. Arrhenius 2007:6f [provisional draft!]). Since votes without (the proper amount of) voting power seem more of a hollow excuse for equality than the real thing, I deem it reasonable to stick to the notion of potential voting power, leaving the problem of how to translate it into some pragmatically manageable measure for another essay.

voting power of either i_1 or i_2, who have one utile each at stake. This distribution could be accomplished by giving 2 votes to i_3, and one vote each to i_1 and i_2, as depicted in table 4.

i_1 (1 vote)	a	**a**	a	a	b	**b**	b	b
i_2 (1 vote)	a	**a**	b	**b**	a	a	b	b
i_3 (2 votes)	a	b	**a**	**b**	**a**	**b**	**a**	**b**
outcome	a	a	a	b	a	b	a	b

Table 4: C_7

According to this table, if everyone votes so as to maximize their own gains, the right result *a* is picked, as stated in the second column from the right.[17] This means that simple majority rule with voting power assigned in proportion to stakes proves to be a better candidate for the Benthamite argument than simple majority rule with equal voting power.

Yet, this argument only compares two of our numerous competitors: simple majority rule with equal versus simple majority rule with weighted voting power. Let us therefore, now that some distinctions for power and equality are in place, take a look at other promising candidates.

6 The competitors re-examined

This section is yet to be written. My hunch is that there will be two candidates that coincide with, or at least maximally approximate, the "proper end" of collective decision making (i.e., maximization of the sum total of happiness): on the one hand, random ballot methods (vote lottery, or random dictator, with weighted votes), and on the other hand, simple majority rule with voting power weighted proportional to stakes.

Random ballot methods (with weighted votes) are in certain respects a worse candidate than majority rule with weighted votes, since the former notion only maximises the *expected* sum total of happiness for sequences of decisions, whereas the latter notion is capable of selecting, for every decision, that alternative which *actually* maximizes the sum total of happiness. On

[17] This is actually not a good illustration at all, since the right outcome in this column is only achieved due to the default outcome being *a*. If we change the default outcome (or switch alternatives so that *a* is better than *b* for i_1 and i_2, and worse for i_3) the outcome will not be right anymore. The main problem here is how to transform the proper ratio of voting power into numbers of votes. To be continued…

the other hand: random ballot methods are strategy-proof and in this respect more reliable means of utility maximisation.[18]

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[18] Cf. Saunders (2007), whose thesis is a defense of the voting lottery.

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