RANKING POLTICIAL SYSTEMS: THE ARISTOTELIAN AND AN INSTITUTIONAL VIEW

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Introduction

During the last 5000 years the competition and contest of large, human communities or political systems, of which modern states are the pressing example, often was decided by a simple, 'evolutionary' mechanism: war and force. However, the increasing destructive power of artifacts which are developed with the help of scientific knowledge seems to diminish the importance of this device -at least among communities with a somewhat rational leadership. For the mere use of modern techniques increases the risk of self-destruction even for that party which otherwise would be said to have won the 'contest'. In this situation it would be desirable to have other, less violent criteria to check whether some political system is better than another one. If we could compare the quality of political systems in a purely conceptual way the practical competition among systems could be reduced to attempts at enlightening the citizens of the respective other system.

There is a well known objection to this idea, saying that a purely descriptive comparison of political systems cannot lead to any ranking because ranking presupposes values. In general, it is hold, there are no neutral values that could be used for the ranking and would make it acceptable to both sides. In other words, of two political systems P and P', P may come out as better than P' with respect to one set of values V while under another set V' of values, P' turns out to be better than P. If V and V' are the values prevailing in P and P', respectively, then citizens of P will rank their own system higher than the other one, and the citizens of P' will do the same.

To this objection there are two answers. First, those who refer to given values hold that, ultimately, values or systems of such must be taken as given because there is a point beyond which no arguments can induce two proponents of two different political systems to change their rankings of these systems. But in reality, relativity of values comes in degrees. The rise of the principle of

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universalizability in ethics, the focus on discussions of human rights in practical contexts, the philosophical approach of basing truth on discourse free of dominion,[2] as well as philosophical arguments undermining the distinction between descriptive and normative sentences[3] indicate that there is more room to oppose value-relativism than one would think when first confronted with this view.

Second, even if differences in basic values are admitted this does not rule out the possibility of analytic comparison. The analytic comparison of complex, conceptual systems has made some progress in the last two decades, notably in the area of comparing scientific theories.[4] In the domain of scientific theories, there was a similar 'relativist', though less basic challenge to the possibility of comparison in the form of Feyerabend's and Kuhn's theses of incommensurability. On closer inspection it turned out however that incommensurable theories cannot only be compared with each other but even can be ranked. Theories T and T' may be incommensurable and nevertheless there may be good reasons to say that T is better than T'. A priori the same could happen with political systems and their value systems. Why shouldn't it be possible to compare systems of values in a way analogous to scientific theories? This has not been done, sure. But the reasons why systems of values have not been compared do not indicate that it is not possible. Such comparisons have not been made simply because up to now systems of values have not been made precise in the way this was done with scientific theories.[5] As long as systems of values are formulated informally and vaguely the sophisticated methods provided by the formal sciences simply cannot be applied. Finally, it should be mentioned that there is one clear cut case in which a comparison is possible, namely when the values in both systems are the same.

For these reasons I am not convinced that the difficulties with values can block the comparison and ranking of political systems, and I think one should not accept that political systems can be compared only on the assumption of an antecedently given normative standpoint. In fact, there is a whole 'comparative' branch of political science in which political systems and constitutions are described and classified, and in this sense compared. These studies, however, have not been extended into full fledged comparisons, comparable to the comparisons of theories as we know them from the philosophy of science. I do not want to analyze the reasons for this neglect but rather want to contribute to the enterprise of comparison and ranking in a more constructive way. To this end I will take up two ways of comparing political systems, outline the basic ideas and try to say something about their relative merits.

The first approach I consider is Aristotle's comprehensive work on this issue as we know it from his books on politics (Politica, 1957) and ethics (especially in

[2] Compare e.g. (Habermas, 1987).
[3] See (White, 1987).
[4] See, for instance, (Balzer et al., 1987), Chap.6.
[5] Compare, however, recent developments in AI, like (Brown & Carmo, 1996).

the (Ethica Nicomachea, 1957)). In this unsurpassable works the analysis and comparison of political systems is based on relatively simple and perspicuous principles which still may serve as a standard of inspiration and comparison for attempts using modern formal means not available to Aristotle. I will contrast this with an approach based on a theory of social institutions which I have proposed[6] and on more formal explications of basic notions which are presently used in order to evaluate political systems. Finally I will make some remarks on the distinctions between the two approaches and on their relative merits.

1 The Aristotelian Approach[7]

A state is defined by Aristotle as a community (koinonia) of families and villages (kome) being conjoined to the end of a perfect and self-supporting life (autarkeia) (P 1281, 85). The order (taxis) of a state with respect to the state-offices (arche) is called its constitution (politeia) (P 1278, 78), so different states with different such order have a different constitution. In this paper, I will use the term 'political system' in a very restricted way such that political systems are identified by their constitutions. Thus the ranking and comparison of political systems comes down to that of different constitutions.

The aim of a state is identified as consisting in the perfect and self-supporting life of its citizens (P 1281, 85; 1332, 236, E 1098, 11; 1101, 18). The perfect and self-supporting life is that which is good and happy (realizes eudemonia). As a result of the considerations in the *Nikomachian Ethics* the good and happy life consists in the perfect realization (energeia) and application of virtue (arete) during a full life-span, being provided for that with the necessary external goods. Thus the aim of a state basically is defined in terms of virtue.

Virtue in turn is defined as a habit in acts of choice, which keeps a humanly determined middle and is led by reason in the way of a clever man (E 1107, 33). There are two kinds of virtues: virtues of reason and practical virtues. Some important examples of practical virtues are courage (E 1115-7, 53ff), temperance (E 1117-9, 60ff.), generosity (E 1119-22, 64ff.), gentleness (E 1225-6, 77ff), veracity (E 1127, 84ff), justice (E 1129-38, 88ff). All these are characterized and discussed in great detail.

[6](Balzer, 1990).

[7]References to the two books *Politics* (Politica, 1957) and *Nikomachian Ethics* (Ethica Nicomachea, 1957) will be directly mentioned in the text and will be made in the form (P s,n) or (E s,n) where P means *Politics*, E means *Nikomachian Ethics*, s is the section and n the page number. In order to avoid at least the worst kinds of meaning change in translation, the Greek original expressions of important notions are sometimes mentioned in modern form and written with roman letters.

The aim of a state then is reached when its citizens have acquired habits of choosing which lead to some equilibrium in the different 'dimensions' of courage, temperance, generosity and so on. Usually, this aim will be reached only to some extent. In one system it may be realized to a larger extent than in another system. Therefore, a direct connection can be established between the general aim of the state and the ranking of constitutions. Constitution C is better than constitution C' if and only if the aim of the state is realized in C to a larger extent than in C'.

At the end of the third book of *Politics* (P 1288, 107-8) Aristotle arrives at the result that the best constitution exists where the state is governed by the best citizens,[8] i.e. where the best citizens occupy the state-offices. The best citizens are those who excel all others in terms of virtue (arete). Yet this characterization of the best state does not hold unrestrictedly. It is relativized to hold only in situations in which the virtuous are willing to rule in a way so as to further the aim of the state, and where the others are willing to let themselves be ruled.

On the basis of these results, definitions and of his empirical material, Aristotle draws a threefold classification of natural, good or 'right' constitutions. The first kind of constitution obtains where one citizen exceeds all others in terms of virtue and in addition has all the supreme power (kyrion tes poleos). The resulting constitution is called kingdom (basileia, P 1285-8, 100ff). In the second category, called aristocracy (P 1293, 123ff), a minority of persons is more virtuous than the rest, and rules. The third system is called *politeia* ('republic') and obtains when the virtuous persons are in the majority (P 1279, 79ff).[9]

It does not become entirely clear whether the ruling persons' virtue by itself guarantees that these persons when ruling will pursue the aim of the state or whether this has to be required as an extra condition. Anyway, the classification relies on this precondition, i.e. these constitutions obtain only if the ruling persons pursue the aim of the state. When this condition is not satisfied, Aristotle distinguishes three further varieties which are inferior to the first three. In the following three cases the ruling persons do not primarily pursue the aim of the state. I will assume that this is due to their not being of excellent virtue.[10] A fourth constitution, called democracy, obtains when the poor citizens have or represent the supreme power, a fifth constitution is characterized by the rich

[8]The notion of citizenship is discussed by Aristotle at length and at a modern level of sophistication (P 1274-6, 67 ff).

[9]The term 'politeia' is used in at least three different meanings in Aristotle. First, it denotes constitutions in general, like e.g. in (P 1331; 1332). Second, it is used to denote a mixture of democracy and oligarchy, e.g. (P 1293; 1294). The third use is found in (P 1279) where *politeia* refers to one of the three systematically distinguished forms, namely that in which the majority of the people represents the supreme power and also takes the common good into account. In the present paper, *politeia* is used exclusively in the third meaning.

[10]The question of whether a virtuous person in office could have an aim different from the general aim of the state certainly is important for the understanding of Aristotle's notion and system of virtues, but cannot be adequately discussed here.

holding or representing the power (oligarchy, P 1279-80, 82), and a final constitution (tyranny) by one person holding the supreme power. Usually, the poor people form the majority, and the rich people are a minority, and therefore the labels are justified. Of course, these categories are 'ideal types'; Aristotle discusses various less ideal, and mixed types. Moreover, the ideal forms may be at odds with what is realized in concrete systems. For instance, if in democracy all citizens have the right of voting then the rich are included in the set of those holding or representing the supreme power, and the set of those who are ruled is empty. In order to deal with such cases more appropriately, the classification would have to be extended such as to include explicit forms of representation.

With respect to the three inferior types of constitutions he offers a straightforward ranking (P 1289 109-110). Writing $X \leq Y$ to express that constitution Y is at least as good as constitution X he states the following order:

$$\text{tyranny} \leq \text{oligarchy} \leq \text{democracy}.$$

Moreover, according to the same passage, all the right types are better than each of the inferior types.

With respect to the three right types of constitutions ranking is difficult. Each type depends on presuppositions of the distribution of virtue among the citizens which by definition do not hold for the other types, so a ranking of these constitutions would require some ranking of distributions of virtue. For example, to say that kingdom is better than aristocracy amounts to saying that a state in which one person is distinguished by virtue is better than a state in which a minority of several persons has more virtue than the rest. Such a statement is normative, and is not in the descriptive spirit of Aristotle's work. No wonder that Aristotle does not clearly state any definite ranking here, eventhough (P 1289, 111) seems to indicate that kingdom is ranked above aristocracy, and aristocracy above politeia. I will not attempt at arguing for a definite ranking implied by the texts. Rather, I will treat the three right kinds of constitutions on a par. Let me write $X \sim Y$ to express that constitutions X and Y are equally good. We thus obtain the full ordering of the six types as follows

$$\text{tyranny} \leq \text{oligarchy} \leq \text{democracy} \leq \text{politeia} \sim \text{aristocracy} \sim \text{kingdom}.$$

It should be mentioned that Aristotle deals with ranking at three different levels. At a first level, constitutions are compared by their type, as described above. At a second level, he compares constitutions within the range of possibilities that exist for one given, concrete *polis*, and at the third level he compares different 'realizations' of a given, concrete constitution.

The justification of this ordering is not as explicit in Aristotle as we would want it to be, but it seems plausible enough. The inferior types of constitutions are inferior to the right types because those being in power in the former are not primarily guided by virtue and thus do not primarily pursue the aim of the state. Assuming that virtuous rulers do pursue the aim of the state, this aim in any of the right constitutions will be realized to a greater extent than in any of the inferior ones. But this was exactly the criterion of one constitution's being better than another.

The ranking of the inferior types may be justified by referring to the following principle: the more persons involved in a deliberation or a decision, the better the result from the perspective of the common good. As we are dealing here with a situation in which decisions concerning common matters are made by persons which possibly are not virtuous, there is the danger that one person takes a decision that will further her personal interests but will have a bad result for others. If more persons must agree on such a decision this danger decreases. Therefore, if more persons are involved in deliberating and deciding it becomes more likely that the resulting decision is better for the aim of the state. Eventhough this argument is not stated in book three of *Politics* in order to justify the ranking of the inferior types I think it can be transfered from other passages to its present use.

As far as the ranking of the right constitutions is concerened it is difficult to find a dominating justification in the texts, as already noted. On the one hand, ranking them as equivalent seems to be justified by pointing to the fact that in each of them the rulers are led by virtue and thus their decisions will pursue the aim of the state (even if this is not explicitly implied by the definitions involved). On the other hand, an argument from the number of decision makers similar to that stated above might be applied. Even if all persons involved in deliberation or decision pursue the aim of the state, such deliberation or decision may be eased by reducing the number of persons participating. A single person may come to a decision more easily than a group of persons in which agreement must be reached. From this perspective the definite ordering mentioned above (politeia $\leq$ aristocracy $\leq$ kingdom) might be justified. However, Aristotle's many qualifications in the discussion of kingdom should make us cautious. The 'price' of ranking the three right kinds on a par is of course that in some cases we may not come to a definite ordering. For instance, if one system is a kingdom and another system is an aristocracy we cannot say that one of them is definitely better than the other.

For the present purpose it is salient that the definitions of the first three, right constitutions are formulated such that each constitution is fully determined by the way of how virtue is distributed among the citizens. If we know which citizens are virtuous and to what degree, we know the right constitution for that state. In the same vein, the three inferior varieties are determined -in the absence of virtue- by the wealth of those who have the supreme power. If we know their number and wealth and if we know that they are not of excellent virtue we know the kind of constitution of that state. In general, in order to find out whether the constitution of one given system is better than that of another one we have to perform two steps. First, we have to determine the number of ruling citizens, whether they are virtuous, and, if not, whether they are rich or poor. These data determine the type of constitution which is realized in the two systems. When the constitutions are determined in this way we simply have to look at the above ordering, and see how they are ranked in that ordering.

2 An Institutional Approach to Ranking

Recent views of the quality of political systems do not use the notion of virtue. The prevailing approach is to look at properties like freedom, equality, solidarity and welfare. Freedom and equality became basic values after the Franch revolution. Today they prevail in the discussions about human rights and basic rights. A human right clearly comprises the two aspects of freedom and equality. On the one hand, the right guarantees a certain -passive or active- minimal space of actions for the individual and therefore a certain degree of freedom from interference by other individuals or institutions. On the other hand, such a right is granted *equally* to every individual. A second feature deeply entrenched in present day political discussion is welfare. It is felt that freedom and equality would not suffice to attach high quality to a political system if the individuals did not have a certain standard of living: material means and social security.[11] Finally, the issue of solidarity has again come into focus due to the present tendencies of reducing all kinds of activities of the state to a minimum.

However, these items are not uniform in their influences on the ranking of systems. At least in contemporary ideological discussion and political fight freedom and equality are mostly represented as opposing each other.[12] A similar opposition is seen between equality and welfare. The political folk doctrine after the breakdown of the USSR seems to hold that equality which can only be implemented by means of state interference leads to a low level of welfare. Attempts to reduce 'the state' and to 'free' citizens from state interference are blamed to lead to the destruction of solidarity, so freedom seems to clash with solidarity. I don't think these propositions are true, I just want to point to the low level of sophistication at which these central issues are treated in the public.

At present, there is no commonly accepted, comprehensive account of ranking political systems comparable to Aristotle's. In fact, it seems not unfair to say that what modern political science has to offer in this respect is not a great improvement of Aristotle's approach. There are comparative branches of political science in which the different constitutions are systematically described

[11] Recall Aristotle's above precondition that the virtuous have to be equipped with the goods necessary to be virtuous.

[12] In Germany after the second world war, the basic alternative in election campaigns always has been 'freedom or socialism' (Freiheit oder Sozialismus) where socialism is basically linked to equality as established by regulations of the state.

and classified but these attempts stop short of ranking. Even the theme of comparison of theories is not much developed in political science.[13]

As I cannot possibly give a survey of the present state of the art in a short paper I will pick out my favorite approach to the ranking of political systems and contrast it with Aristotle's. This approach consists of a combination of a power centered view of social affairs in the spirit of, say, Machiavelli, and a systemic, formal model of such affairs, and yields a comprehensive theory of social institutions capturing political systems like states -among other things.[14] According to this theory a social institution is given by four parts: a micro-system of individuals and their actions and social relations, a macro-system of social groups and their properties and relations, and two 'images' of these two systems: a set of 'micro-images', images of the micro-system which are internalized by the institution's members, and a 'macro-image' in which the macro-system is represented in some more objective way, for instance by written laws, norms, myths, poems, pictures and the like.[15] Concentrating on the macro- and micro-systems, one basic feature of this theory is that individuals are engaged in power relations. Each individual tries to exert power (or to influence, in a more neutral terminology) over other individuals. An individual power relation in which this happens is constituted by the two individuals involved plus one action performed by each of them. For instance, Peter may exert power over John by uttering the command 'Go and get me some cigarettes' and by John's getting the cigarettes, where Peter's action is the utterance and John's action is to get the cigarettes. A second basic feature is that individual power relations can be used to characterize groups and a status relation among groups. Roughly, a group γ has lower status than another group γ' iff many members of γ' exert power over many members of γ but not vice versa. Inside one group, on the other hand, the exertions of power are in equilibrium. The third important feature is that in a social institution the groups are ordered by the status relation such that they form a connected, transitive graph with a unique top-element. This top-element is the 'top-group', a group which has highest status and whose members therefore exert power over most members of the other groups.

A model of this theory contains the stuff needed to discuss freedom, equality and solidarity, and it forms a natural basis on which some notion of welfare may be introduced. This can be elaborated in three steps. First, the model contains representations of the supreme power. The supreme power is represented by the persons occupying the central positions, by their role-behavior when they act as occupants of those positions, and by the norms regulating such behavior.

[13] One of the few exceptions is (Eckstein, 1979).

[14] In the social sciences presently the game theoretic view seems to prevail when institutions are discussed. However, what are called 'institutions' in the game theoretic approach are not political systems, but more local and abstract things like 'promise', 'convention' and the like. Up to now game theoretic analysis has not been able to model and to explain one single political system of the kind we are discussing here.

[15] A short, systematic description is found in (Balzer, 1990), for more details see (Balzer, 1993).

These items are captured by the model.

Second, freedom and equality can be defined in terms of individual power relations. Let me briefly indicate how to do this. At the micro level there are four kinds of objects: persons i, j, actions a, b, and points of time t, t'. Persons perform actions and exert power over each other. Moreover, they have intentions and causal beliefs. We use the expressions that person i at time t performs action a, that i by doing a exerts power over j so that j does b in the interval from t' to t, that at time t, i intends that j should do a, and that, at t, i believes that action a partially causes action b. With these expressions we can define the *action space* $AS(i,t)$ of person i at time t to consist of all actions which are possible for i at t.[16] We say that j's action b *at* t *is the aim of an exertion of power* iff there is some person i, some earlier instant t' and some action a such that i by doing a exerts power over j so that j does b in the interval (t', t). With these two auxiliary definitions we can define that person j *is free at* t iff no action b in j's action space at t is the aim of an exertion of power. That is, no action b in j's action space is induced by some other person's exerting power on j and influencing j to do b. Actually, in the present context the restriction to actions from j's action space makes no difference. We might as well consider arbitrary actions (see Lemma 2 in the appendix).

This definition of freeedom exclusively in terms of individual exertions of power apparently is exposed to a well known criticism of behaviorist approaches to power.[17] It seems that important ways of exerting power in a less direct, 'structural' way are not covered, like for instance excluding an issue from the agenda, or hiding an exertion of power behind the obligations of one's own social position. Yet this impression is misleading. First, in the present account, the notion of action is not understood in the naive way of positively doing something. Actions form a 'space' of actions in which there is room for neutral behavior (doing nothing) and also for negative behavior (expressed by a negated proposition) to count as an action.[18] Second, in the context of a social institution, each exertion of power is directly linked to mental predicates of intention and causal beliefs, and indirectly linked to macro-features like social positions and norms. I cannot describe the details here but just note that in an institutional embedding an exertion of power -though at the surface described by a relation among actors and actions- may acquire the full status of social or institutional power which is required for a proper understanding of domination.[19] When embedded in a social institution, the present definition of freedom expresses much more than the merely behaviorist absence of tokens of influence.

Of the two basic versions of freedom: freedom 'from' influence and freedom 'to do' what one wants, the above definition covers the first notion. It is difficult to relate these two notions in precise terms because the domain of humans wants

[16] These definitions and the following theorems are elaborated in the appendix.
[17] See (Lukes, 1974).
[18] See (Balzer, 1993), Chap.6.
[19] Compare the definition in (Balzer, 1993), Chap.12.

is so fuzzy. If we could distinguish, in a given state, the domain of *materially possible* actions which j could perform if nobody would exert power over him and the domain of *actually possible* actions obtained by removing from the first domain all those actions which are made impossible by other persons' exerting power over j we might say that 'freedom to do' is constrained in two ways. First, it is constrained by the domain of materially possible actions. A person cannot perform materially impossible actions, whether she wants to do so or not. Additional to this first constraint, 'freedom to do' is further narrowed down by other persons' influences making materially possible actions impossible. Under this perspective, if the domains of material possibility depend on the level of welfare then the level of 'materially possible' freedom, i.e. freedom that would prevail in the presence of freedom from influence, is higher in states with a higher level of welfare. However, this distinction does not seem to be fruitful for in reality the 'material' level and the level of influence are heavily dependent on each other. For instance, a rise of the level of welfare usually is accompanied by increased suffering of exertions of power so that the overall freedom 'to do' of a person does not increase (or even decreases) when welfare does. Moreover, freedom 'to do' allows for ideal, individualistic realization of freedom: I simply cut down my wants in order to become completely free. This shows that freedom 'to do' is not well suited for discussions of essentially social matters like the ranking of constitutions, and that freedom 'from' is the right notion to be used here.

Equality can be defined by distinguishing *external* and *internal* equality. We say that two persons i, j *at* t *are externally equal* iff they exert 'the same' power over third persons k, and are affected by third persons exerting power over them in 'the same' way. Clearly, 'the same' here must be interpreted somewhat liberally. I take it to mean that whenever i exerts power over some k by means of some action a then there is an action a' by which j exerts power over k,[20] and vice versa (see D3, Appendix) with i and j interchanged, and that whenever some k exerts power over i by means of some action a then the same k also exerts power over j by some a' and vice versa with i and j interchanged. i and j are *internally equal at* t iff each exertion of power of i over j is matched by one of j over i and vice versa. Finally, we can say that i and j are *equal* (at t) iff i and j are externally and internally equal at t. Note that this definition captures *social* equality as contrasted to physiological or other kinds of 'non-social' equality. Two persons may be equal in the sense defined but still widely differ, say, in strength, intelligence or wealth.

It is easily seen by counterexamples that one person may be free but not equal to another one, or may be equal to another one but not free. Also, it can be shown by way of example that even complete equality of all citizens may go together with the absence of freedom (Theorem 2 of the appendix). In the

[20] In a more fine grained analysis one would use action-types and require that a and a' be actions of the same type, compare (Balzer, 1994).

reverse direction there is a positive result. If all citizens are free then they are equal (Theorem 1), or, more briefly: total freedom implies equality. This result holds for the notion of 'freedom from', and may be expressed in still other terms as saying that equality is a necessary condition for freedom ('freedom from').[21]

Third, the notion of welfare may be added to the notions introduced so far without problem. Welfare may be represented in two ways. It can be represented in 'material' terms by specifying the citizens' endowments with commodities, but also it can be represented more subjectively in terms of the citizens' utilities which they derive from their endowments. In the subjective version the well known problem for comparison is that the specific numerical utility values have no empirical meaning, nor has their comparison for different persons, or their addition. Up to now there is no accepted criterion for aggregating individual utilities into one 'social' utility function. The 'material' approach also faces such a difficulty, but a less severe one. Following the standard development of utilitarianism philosophers are not satisfied with giving equal weights to all citizens. In the present case this means that the same amount of a good possessed by two different persons must not be treated as the same when these possessions enter into a systemic comparison.

The ranking of two political systems according to these notions will naturally refer to a comparison of 'total' freedom, equality, solidarity and welfare. If constitution C provides *more* freedom *and more* equality *and more* solidarity *and more* welfare than constitution C' then C is better than C'. Comparison along these lines is unproblematic at least in the special case mentioned where all four notions are ordered in the same way. In mixed cases, like that of increase of welfare together with a decrease of freedom, no way is known of how to combine the different criteria in order to obtain a definite result.

Note that the condition of 'more freedom' is directly linked to the presence or absence of power relations. An increase of freedom by the above definition implies that less exertions of power are made: 'more freedom implies less exertion of power'. On the other hand, equality may vary without any change in the numbers of exertions of power, for instance, by mere 'redistribution' of such exertions in the population. 'More welfare' in first approximation may be expressed in terms of the individuals' endowments: 'more welfare' means 'greater mean endowment'.

Note further, that the four different dimensions of freedom, equality, welfare and solidarity are largely independent of each other. This can be shown by logical comparison, and by showing that under fixed, hypothetical conditions, a variation in one dimension is compatible with no variation in the other dimensions. For instance, if freedom increases the other three 'variables': the degree of equality, of welfare and of solidarity, may remain unchanged. In particular this shows that freedom and equality -even if both are defined in terms of power-

[21] Solidarity is too complex a notion to be treated in brief. It centrally relies on the notion of joint attitudes which have recently been analyzed in detail, see for instance (Balzer & Tuomela, 1997).

yield different criteria for the ranking of political systems. The fact that we can define both these notions in terms of power does not imply that the comparison of political systems in these two dimensions can be 'reduced' to one, more basic criterion formulated in terms of exertions of power.

3 Aspects of Comparison

When confronting the two approaches to the ranking of political systems with each other the following features seem to be salient.

First, Aristotle's approach is empirical in spirit. In order to determine a constitution one has to look at the virtues or the wealth of those who hold the supreme power. Though virtues are of dispositional nature, the approach is in principle operational, for these dispositions show up in concrete actions. In order to determine a constitution one has to look at the actions and the wealth of the powerful. The institutional approach also refers to actions (through performance and power relations) but in addition is based on 'internalistic' notions like belief and intention. It has to be stressed that we are not concerned with people actually choosing one preferred constitution (say, by voting for it) but rather with a scientific determination according to Aristotle's scheme. Whereas in an actual vote for a political system propaganda and misperception may play a decisive role, this should not be the case in a scientific ranking.

Second, Aristotle's account is definitely descriptive. He takes inequalities not only for granted but treats them as *natural*. Individuals *are* different, so it would be unjust to treat them alike in all respects. Aristotle's principle of distributive justice accordingly says that the same goods should be given to persons of the same rank but different amounts to persons of different rank. Moreover, the ruling citizens play a distinguished role, and in most of his constitutions minorities (whether in terms of virtue or of wealth) are decisive. Modern views by contrast are committed to the equality of all citizens in constitutional matters. Wealth, virtues, beliefs and intentions should not make a difference for a citizen's rights, roles and duties. It seems to me that this modern insistence on constitutional equality to a large extent is normative and also counterfactual. Though practically all modern constitutions guarantee equality of all citizens in several respects, *de facto* there are differences in the treatment and possible activities of different citizens. In this respect, Aristotle reminds us of the factual side of constitutions which seems to be underrepresented in philosophical discussions of constitutional matters.

Third, there is a similarity between Aristotle's approach to the 'natural' constitutions (kingdom, aristocracy, politeia) and the institutional approach in that both are based on individualistic notions: virtues in one case, intentions and causal beliefs in the other. Both these accounts are 'relational' or 'structural' insofar as constitutions are characterized in terms of their citizens' properties and relations. On the other hand, Aristotle's 'variety'-constitutions (tyranny, oligarchy, democracy) are not of that kind. Their characterization refers to the wealth of some persons, which is an 'external' feature. Today one would say that the wealth of a person is something that should be irrelevant for the constitution of the state to which the person belongs. Relative to a constitution, wealth today is seen as accidental and contingent. A constitution must not change, when the wealth of some persons is transfered to other persons. But this may happen with Aristotle's varieties.

Fourth, as already indicated, the institutional approach refers to several different criteria or dimensions of comparison which in general do not vary uniformly.[22] It is not clear whether this should count as an advantage or not. In a positive vein, one would say that constitutions, like matters of law, have multiple, and incompatible dimensions which have to be weighed against each other in each practical case. Negatively, one could point out that Aristotle succeeded in formulating a 'one-dimensional' account already more than 2000 years ago.

Conclusions

At least three conclusions may be drawn from the present comparison. First, in spite of the unsatisfactory modern state of the art of ranking we may draw the lesson from Aristotle that ranking is possible. This seems trivial to philosophers who of course know and esteem Aristotle's achivements, but the conclusion aims at political science and is intended as a contribution to the advancement of modern attempts at ranking.

The second lesson from Aristotle is that ranking may be achieved by using a *unifying* criterion. This is a criterion in which different and possibly competing dimensions of action are bound together such that individual action is led by, and reflects, the structure ('constitution') of the society in which an actor lives. Modern approaches based on utility lack such a criterion, though the formalism available would allow its incorporation. Aristotle demonstrated the fruitfulness and the applicability of such a unifying criterion. In his approach the notion of virtue plays the crucial, double-sided role required. On the individual level, virtues are the guide for individual behavior, but at the same time the notion

[22] This feature is also found in most other, recent accounts.

reflects the situation of the polis.

A third conclusion resulting from the investiagtion of freedom and equality is that the relation between the central dimensions of modern ways of ranking may be more harmonious than expected. When embedded in a more comprehensive social model, and when explicated in precise terms, new and unexpected relations turn up (like the implication of ideal equality by ideal freedom).

This brings me to a last point. It seems to me that Aristotle's system of virtues has not received sufficient attention by modern linguists. As linguists get increasingly interested in systems of verbal phrases[23] there is increasing demand for various classification systems by which groups of verbal phrases can be structured. It seems to me that Aristotle's different virtues may function just in this way. They can help to structure the bewildering multiplicity of individual kinds of actions and to build up spaces of possible behavior and action which are needed for social, political and ethical theorizing.

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[23] See, for instance, (Ballmer & Brennenstuhl, 1981).

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Appendix: Freedom and Equality Based on Power

By a *social micro-system* I understand a system $(J, A, T, <, perform, power, int, cbel)$ where J, A, T are non-empty, disjoint sets, and $< \subseteq T \times T, perform \subseteq T \times J \times A, power \subseteq T \times T \times J \times A \times J \times A, int \subseteq T \times J \times J \times A$ and $cbel \subseteq T \times J \times A \times A$ such that

A1) $(T, <)$ is a linear order and

A2) for all $t, t' \in T, i, j \in J, a, b \in A : power(t', t, i, a, j, b) \leftrightarrow$
$i \neq j \wedge t' < t \wedge perform(t', i, a) \wedge perform(t, j, b) \wedge$
$int(t', i, j, b) \wedge \neg int(t, j, j, b) \wedge$
$(cbel(t, i, a, b) \vee cbel(t, j, a, b))$.[24]

These items are interpreted as follows.
- J: by a set of persons, persons are denoted by i, j
- A: by a set of actions, actions are denoted by a, b
- T: by a set of points of time, points of time are denoted by t, t'
- $t' < t$ means: instance t is later than instance t'
- $perform(t, i, a)$ means: i at t performs action a
- $int(t, i, j, a)$ means: i intends at t that j should do action a
- $cbel(t, i, a, b)$ means: at t, i believes that a is a partial cause of b
- $power(t', t, i, a, j, b)$ means: in the period from t' to t i by doing a exerts power over j so that j does b.

The *action space* $AS(i, t)$ of i at t is defined as the set of actions which i at t possibly can perform.

[24]Compare (Balzer, 1992).

D1 $AS(i,t) = \{a \in A / \Diamond perform(t,i,a)\}$.[25]

D2 $j \in J$ is $free\ at\ t$ iff $\forall a, b \in A \forall j \in J \forall t' \in T(t' < t \rightarrow \neg power(t', t, i, a, j, b))$.

Obviously, j is free at t iff $\neg\exists a, b \in A \exists j \exists t'(t' < t \wedge power(t', t, i, a, j, b))$. We say that j's action b *is the aim of an exertion of power by* (i, a) *in* (t', t) (or: j's action b at t has been induced by i's exerting power over j by doing a at t') iff $(t' < t \wedge power(t', t, i, a, j, b))$, and we say that (j, b) *at* t *is the aim of an exertion of power* iff there exist i, a, t' such that j's action b is the aim of an exertion of power by (i, a) in (t', t). Thus j is free at t iff there is no action b such that j's doing b at t is the aim of an exertion of power.

D3 Let $i, j \in J$ and $t \in T$.
a) i and j are *externally equal at* t ($i \equiv_{ex,t} j$) iff $\forall k \in J \setminus \{i, j\}$:
$(\exists a, b, t'\ power(t', t, i, a, k, b) \leftrightarrow \exists a', b', t''\ power(t'', t, j, a', k, b')) \wedge$
$(\exists a, b, t'\ power(t', t, k, a, i, b) \leftrightarrow \exists a', b', t''\ power(t'', t, k, a', j, b'))$.
b) i and j are *internally equal at* t ($i \equiv_{in,t} j$) iff
$\exists a, b, t'\ power(t', t, i, a, j, b) \leftrightarrow \exists a', b', t'' power(t'', t, j, a', i, b')$.
c) i and j are *equal* iff, for all $t \in T : i \equiv_{ex,t} j \wedge i \equiv_{in,t} j$.
In the following, let $(J, A, T, <, perform, power, int, cbel)$ be a social micro-system.

Lemma 1 For all $i \in J : i$ and i are equal.
Proof: D3-a is trivially satisfied. D3-b is satisfied because in each direction the respective premiss is false, by A2.□

Lemma 2 For all $i \in J, t \in T$: i is free at t iff $\forall a, b, i, t'(b \in AS(j, t) \wedge t' < t \rightarrow \neg power(t', t, i, a, j, b))$.
Proof: "$\Rightarrow$": Trivial because an additional assumption is introduced for the implication. "$\Leftarrow$": Suppose the right-hand side is satisfied but $\neg free(j, t)$. By D2 there exist i, a, b, t' such that $t' < t$ and (1) $power(t', t, i, a, j, b)$. This implies, by A2, $perform(t, j, b)$ from which, by D1 (and standard principles of modal logics[26]), we obtain $b \in AS(j, t)$. From this and the right-hand side we obtain $\neg power(t', t, i, a, j, b)$ in contradiction to (1).□
Lemma 2 says that it makes no difference if in the definition of being free arbitrary actions are considered for j or only actions which are in j's action space at t.

Theorem 1 If all $i \in J$ are free at all $t \in T$ then all $i, j \in J$ are equal.
Proof: Suppose there exist t, i, j such that $i \neq j$ and i, j are not equal at t. From D3 it follows without restriction of generality that
$\exists k \exists a, b, t'(t' < t \wedge power(t', t, i, a, k, b))$. But D2 implies
$\neg\exists a, b, i, t'(t' < t \wedge power(t', t, i, a, k, b))$ which is a contradiction.□

[25] '$\Diamond$' is the usual modal possibility operator. Modal notions are left implicit here. A modal frame could be easily defined and used without changing the following results.
[26] See (Chellas, 1980).

Theorem 2 If all persons are equal it does not follow that they are free.
Proof: Construct a social micro-system which two actors i, j and two instants with exactly one exertion of power of i over j in (t', t) and exactly one exertion of power of j over i in (t', t). Then i, j are equal at t but not free at t.□