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Analyzing the Caesar Model**

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April 2008

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ABSTRACT

Shall We Kill or Enslave Caesar? Analyzing the Caesar Model*

When a society overthrows a ruler – call the ruler Caesar – what determines whether Caesar is killed or enslaved? This paper presents a model of killing versus enslaving Caesar, based on a new theory which unifies justice, status, and power. The model pertains to societies which value ordinal goods like bravery, yielding predictions for three of the five types of societies – justice-nonmaterialistic, status, and power-nonmaterialistic. Results cover members' gains, effects of own rank and group size, and relative gains from killing or enslaving Caesar. Further results suggest that Caesar will be killed only in a justice-nonmaterialistic society, and from the noblest of motives – to achieve equal gains for members.

JEL Classification: D6, I3, N40

Keywords: civil strife, coup d'état, regicide, tyrannicide, assassination, imprisonment, exile, sociobehavioral theory, justice, comparison, status, power, identity, happiness, personal qualitative characteristics, hierarchy, equality

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Uneasy lies the head that wears a crown.

William Shakespeare, *Henry IV, Part II*

One of the most efficacious remedies that a prince can have against conspiracies is not to be hated and despised by the people, for he who conspires against a prince always expects to please them by his removal; but when the conspirator can only look forward to offending them, he will not have the courage to take such a course, for the difficulties that confront a conspirator are infinite.

Nicolò Machiavelli, *The Prince*

1. INTRODUCTION

We have grown up with images of kings killed and emperors assassinated. From the stabbing of Caesar to the guillotining of Louis XVI to the shooting of Czar Nicholas, we have asked *why*. Why not send them into exile? Or imprison them? Or place them under house arrest? *Why kill them?* There are two important pertinent scholarly traditions, one historical, the other philosophical. The historical tradition provides a positive account of the long series of killings of tyrants. And the philosophical tradition offers a normative discussion of the conditions under which tyrannicide is permissible, or even obligatory (and of who should or should not participate and the means by which it should be carried out). Yet the behavioral question remains. *Why kill Caesar?*¹

Meanwhile, as scientific understanding of human behavior grows, new theories yield new insights. One of the grand insights of twentieth century social science – inherited from the Greeks -- was the centrality of justice processes (Homans 1974; Berger, Zelditch, Anderson, and

¹ The historical and philosophical literatures on tyrannicide are voluminous. See, for example, the classic *Policraticus* by John of Salisbury ([1159] 1909) and the extensive commentaries in the 849 years since its publication.

Cohen 1972; Jasso 1980). The long reach of justice can be discerned in virtually all of human behavior, from love to crime, from gifts to revolution, from religious institutions to disasters.

In this paper, we use the lens of justice analysis to explore the old question, why kill Caesar? We use the axiomatization developed by Jasso in a long series of papers (starting in 1978 and 1980 and recently summarized in 2005, 2006b, and 2007 (and more briefly in 2006a). This axiomatization distinguishes between societies which value *cardinal* things (like wealth and land) called *materialistic societies* -- and societies which value *ordinal* things (like beauty and intelligence) -- called *nonmaterialistic societies*. But the engine is the same for both, namely, the justice force.

The justice axiomatization begins with the four central questions in the study of justice, as compiled by Jasso and Wegener (1997):

1. What do individuals and societies think is just, and why?
2. How do ideas of justice shape determination of actual situations?
3. What is the magnitude of the perceived injustice associated with departures from perfect justice?
4. What are the behavioral and social consequences of perceived injustice?

The work reported in this paper falls under the fourth central question but uses the building-blocks developed to address the other questions, notably the justice evaluation function, which addresses the third question and in theoretical justice analysis operates as first postulate.

There is a large literature on the fourth central question, often referred to as the literature on reactions to injustice (Hegtvedt 2006). Examples include Adams (1965), Cohen-Charash and Spector (2001), and Tyler, Boeckmann, Smith, and Huo (1997), as well as Jasso's theoretical work on justice and comparison processes, some of which is referenced in this paper. For more general overviews of justice analysis, see Hegtvedt (2006) and Jasso (2006a). Besides the literature on reactions to injustice, there is another large literature on ideas about what is just (addressing the first central question). Hegtvedt (2006:47) and Jasso (2007:339, 343-344) show how the justice evaluation function serves as a bridge that connects the two literatures.

For a long time, perhaps all of the twentieth century, it was known that not all persons or societies fall under the aegis of justice. Like the tone-deaf or color-blind, some persons seem justice-oblivious, as do the societies they form.

And, similarly, for a long time it was unclear how justice is related to other basic processes, such as status and power. Indeed, some authors used the terms interchangeably, while for others one or the other had primacy. Certainly everyone agreed that all three candidates for basic forces – *status*, *justice*, *power* – are responsive to the same human characteristics. Wealth, for example, increases status, and it pushes toward unjust overreward, and it increases power. So do beauty, intelligence, and skills of all kinds (athletic, musical, artistic). There is a status hierarchy, and a power hierarchy, and a justice hierarchy (though sometimes “continuum” is used instead of “hierarchy”).

Status and power, like justice, are also addressed by large literatures. For brief introduction to status theory, see Berger and Webster (2006), Jasso (2001b), and Ridgeway (2006). Jasso and Kotz (2007) describe how the mathematical foundation for studying status was laid by Berger, Cohen, and Zelditch (1966), Berger, Fisek, Norman, and Zelditch (1977), Goode (1978), and Sørensen (1979). Jasso (2004) proposes a list of four central questions in the study of status. The work reported in this paper addresses the fourth question, which, paralleling the list in justice analysis, is: “What are the behavioral and social consequences of according and receiving status and of discrepancies between expected and received status?”

The literatures on power are voluminous. For example, one literature can be traced to the classic paper by Emerson (1962) and brief introduction to more than forty years of elaboration and extension is provided by Cook, Cheshire, and Gerbasi (2006).

The early 21st century has brought a possible solution to the puzzle of the exact relations among the three candidate forces – justice, status, and power. This possible solution rests on the suggestion that they each have *distinctive rates of change* (Jasso 2007, in press). Although all three are increasing functions of the same things (such as wealth or beauty), they each increase at a distinctive rate. Jasso’s axiomatization of justice includes a proof that the justice evaluation

increases as the logarithm of the ratio of the actual reward to the just reward, thus implying that justice increases at a decreasing rate with the valued good (Jasso 1990). The axiomatization of status based on the Goode-Sørensen formulation proposes that status increases at an increasing rate with the valued good (Jasso 2001b). Thus, if power is truly a distinct force – and not merely another name for status, or for justice – it must increase at a constant rate.² To visualize the distinctive rates of change, Figure 1 depicts the three sociobehavioral forces in a 12-person group which values an ordinal good.

– Figure 1 about here –

This proposed solution led to a *new unified theory* with its own new axiomatization and a new view of the three sociobehavioral forces as not only fundamental but also, and importantly, in competition with each other for the hearts and minds of persons and the societies they form. The justice-oblivious may be votaries of status or acolytes of power.

As well, the new unified theory suggests that each of the three sociobehavioral forces generates, during the time it is active, identity and happiness.

Accordingly, it follows that correct understanding of the sense of justice is not possible without understanding its rivals, for to understand justice is to understand its boundaries and limitations. In this paper, we thus explore the question, Why kill Caesar? using not only the justice lens but also the status and power lenses. As will be seen, this approach enables a strong conclusion about the part played by justice processes in “killing Caesar.”

As noted, in justice theory, people and societies can be materialistic or nonmaterialistic. So, too, in power societies; people can care about wealth or about beauty, the first treated as a cardinal good and the second as an ordinal good. Not so in the world of status. The Goode-Sørensen formulation asserts that status notices only relative ranks; the status votary may care about wealth but only in the form of wealth rank, not in the form of wealth amount. Thus, in the

² Power is widely thought to increase with personal quantitative characteristics – such as wealth – but the research record is sparse with respect to the form of the function (Webster 2006). Thus, the power force is compatible with a constant rate of change.

new unified theory of sociobehavioral forces, there are five main types of societies: justice-materialistic, justice-nonmaterialistic, status, power-materialistic, and power-nonmaterialistic.

The killing-Caesar model we develop notices only ranks. Thus, we explore three possible kinds of societies: justice-nonmaterialistic, status, and power-nonmaterialistic. It is possible, of course, to examine killing Caesar in a materialistic regime, but we think it less natural and leave it to a future exercise.

Further, we must consider an alternative to killing Caesar. The alternative we choose is enslaving Caesar. Empirically, enslaving can take the form of house arrest, imprisonment, or actual enslavement. The important feature of enslavement is that Caesar topples from top rank to bottom rank.

Finally, our results are general and can be applied to many different kinds of real-world situations. For example, the focal group can be a set of conspirators or an entire society. Similarly, the setting can be a country, an association, a club. In some contexts, the killing-Caesar option is equivalent to permanent exile. We leave to future work a further analysis to distinguish between killing and exiling Caesar, while noting that in some contexts, such as clubs, throwing someone out of the club is the operational equivalent of killing Caesar.

2. THEORETICAL SETUP

2.1. Elements of the Setup Common to All Three Kinds of Societies

Consider a group with N members. The members all value the same good – such as wealth, land, cattle, military prowess, bravery, or horsemanship. If the good is cardinal (such as wealth, land, or head of cattle), the members value its ordinal manifestation. Accordingly, the N members are ranked, with the rank i going from 1 for the lowest-ranked to N for the highest-ranked. The sociobehavioral force generates a score for each person – such as a magnitude of status or of the justice evaluation – and also generates an identity and a magnitude of happiness (Jasso 2007, in press).

In the situation we explore, the highest-ranked person – Caesar -- is overthrown.

Empirically, this can be the work of all the other members, or of a subset of conspirators, or even of an outsider. The group remains intact (except for Caesar's unseating); no outsider becomes a member.

The top-ranked person may, but need not, be a ruler; if a ruler, the top-ranked person may be tyrannical or beneficent. Obviously, the case of the tyrant is the classic case discussed by Plato, Aristotle, Augustine, John of Salisbury, Aquinas, and others in their analyses of sedition as a response to injustice. "Without justice, what are kingdoms but great robberies," asks Augustine (*City of God*, Book IV, Ch 4). And Aquinas (*Summa Theologica* II-II, Q. 42, art. 2), analyzing the morality of tyrannicide, notes, "It is the tyrant rather that is guilty of sedition."

Again, the model is applicable to any group or society with a hierarchy based on a valued ordinal characteristic. Caesar is the top-ranked person in the group's hierarchy.

Killing Caesar – what happens to group size and own rank? It is obvious that in the killing scenario, group size diminishes by one. Formally, group size at Time 1 is N ; at Time 2 it is $N-1$. Given that the top person is killed, own rank stays the same for all other group members. Formally, own rank is i at both Time 1 and Time 2.

Enslaving Caesar – what happens to group size and own rank? In this scenario it is obvious that group size stays the same. Formally, group size is N at both Time 1 and Time 2. Own rank, however, increases by one for all group members, given that Caesar is now the lowest-ranked person. Formally, own rank is i at Time 1 and increases to $i+1$ at Time 2.

To analyze the effects on each group member, we use the technique of theoretical derivation known as the *micromodel* strategy. The basic idea is that an event – in this case, killing or enslaving Caesar – produces a *change* in each group member's well-being by altering the justice, status, or power score. The change may be positive or negative; that is, individuals may become better-off or worse-off as a result of the focal event. This technique has been used

to analyze effects of gifts, theft, disasters, and so on.³

2.2. Caesar Model in a Justice-Nonmaterialistic Society

The justice-nonmaterialistic version of the Caesar model begins with the first postulate of justice theory, the justice evaluation function, expressed for ordinal goods:

$$J = \ln \left(\frac{r_A}{r_C} \right), \quad (1)$$

where J denotes the justice evaluation, r denotes the individual's relative rank, and the subscripts A and C denote the *actual* and *just* elements, respectively. The relative rank is approximated by $i/(N+1)$, where, as before, i is the absolute rank and N is the group size, leading to:⁴

$$J = \ln \left(\frac{[i/(N+1)]_A}{[i/(N+1)]_C} \right). \quad (2)$$

The change in the justice evaluation from Time 1 to Time 2 is denoted CJ and written:

$$CJ = \ln \left(\frac{[i/(N+1)]_A}{[i/(N+1)]_C} \right)_2 - \ln \left(\frac{[i/(N+1)]_A}{[i/(N+1)]_C} \right)_1, \quad (3)$$

where the subscripts "1" and "2" denote Time 1 and Time 2, respectively.

Assuming that the just reward remains the same from Time 1 to Time 2, we obtain:

$$CJ = \ln \left(\frac{[i/(N+1)]_{A2}}{[i/(N+1)]_{A1}} \right), \quad (4)$$

and thence:

³ For comprehensive exposition of the micromodel and an extended example, see Jasso (2001a); for two additional extended examples, see Jasso (2004, 2006b).

⁴ The relative ranks have several appealing properties. First, their arithmetic mean is exactly one-half. Second, the first and N th relative ranks are equidistant from 0 and 1, respectively, and also from the mean. Third, the elements of each subrange pair (e.g., 2 and $N-1$) are equidistant from 0 and 1, respectively, and also from the mean.

$$CJ = \ln\left(\frac{i_2(N_1+1)}{i_1(N_2+1)}\right). \quad (5)$$

Applying to formula (5) the rules in Section 2.1 for the changes in own rank i and group size N in the killing and enslaving scenarios yields the final expressions for CJ in the two scenarios:

$$CJ = \begin{cases} \ln\left(\frac{N+1}{N}\right), & \text{kill Caesar} \\ \ln\left(\frac{i+1}{i}\right), & \text{enslave Caesar.} \end{cases} \quad (6)$$

2.3. Caesar Model in a Status Society

The status version of the Caesar model begins with the first postulate of status theory, the status function (also known as the S1 function):

$$S = \ln\left(\frac{1}{1-r}\right), \quad (7)$$

where S denotes status and r denotes relative rank.⁵ Replacing r by its approximation $i/(N+1)$ yields:

$$S = \ln\left(\frac{N+1}{N+1-i}\right), \quad (8)$$

where, as before, i and N denote own rank and group size, respectively.

The change in status from Time 1 to Time 2 is denoted CS and written:

$$CS = \ln\left(\frac{N+1}{N+1-i}\right)_2 - \ln\left(\frac{N+1}{N+1-i}\right)_1, \quad (9)$$

⁵ The unsubscripted relative rank is equivalent to the “actual” relative rank in the justice evaluation. While status is generated by the actual rank alone, the justice evaluation is generated by comparison of the actual relative rank to the “just” relative rank.

where, as before, the subscripts “1” and “2” denote Time 1 and Time 2, respectively. Formula (9) reduces to:

$$CS = \ln \left[\frac{(N_2+1)(N_1+1-i_1)}{(N_1+1)(N_2+1-i_2)} \right]. \quad (10)$$

Applying to formula (10) the rules in Section 2.1 for the changes in own rank i and group size N in the killing and enslaving scenarios yields the final expressions for CS in the two scenarios:

$$CS = \begin{cases} \ln \left(\frac{N(N+1-i)}{(N+1)(N-i)} \right), & \text{kill Caesar} \\ \ln \left(\frac{N+1-i}{N-i} \right), & \text{enslave Caesar .} \end{cases} \quad (11)$$

2.4. Caesar Model in a Power Society

The power version of the Caesar model begins with the first postulate of the fledgling power theory. Here power increases at a constant rate with the valued good. For ordinal goods, power increases at a constant rate with relative rank:

$$P = r, \quad (12)$$

where P denotes power and, as before, r denotes relative rank. Replacing r by its approximation $i/(N+1)$ yields:

$$P = \frac{i}{N+1}. \quad (13)$$

The change in power from Time 1 to Time 2 is denoted CP and written:

$$CP = \left(\frac{i}{N+1} \right)_2 - \left(\frac{i}{N+1} \right)_1. \quad (14)$$

Applying to formula (14) the rules in Section 2.1 for the changes in own rank i and group size N in the killing and enslaving scenarios yields the final expressions for CP in the two

scenarios:

$$CP = \begin{cases} \frac{i}{N^2+N}, & \text{kill Caesar} \\ \frac{1}{N+1}, & \text{enslave Caesar .} \end{cases} \quad (15)$$

2.5. Analyzing *CJ*, *CS*, and *CP*

To assess the effects of killing versus enslaving Caesar, we pose the following questions:

1. For each group member, is the change in well-being (*CJ*, *CS*, or *CP*) positive or negative?
2. What is the ceteris paribus effect of own rank *i* on *CJ*, *CS*, and *CP*?
3. What is the ceteris paribus effect of group size *N* on *CJ*, *CS*, and *CP*?
4. Under which scenario – killing or enslaving Caesar – are group members better-off?

To answer the first question, we evaluate the sign of formulas (6), (11), and (15) for *CJ*, *CS*, and *CP* in the two scenarios. To answer the second and third questions, we obtain the first partial derivatives of the six formulas in (6), (11), and (15) with respect to own rank and group size. Finally, to answer the fourth question, we set up and solve the inequality formed by the formulas for the two scenarios in each of the three force-regimes.

3. THEORETICAL RESULTS

3.1. Do Group Members Become Better-Off

When Caesar Is Killed or Enslaved?

Evaluating the sign of the six change formulas (panel A of Table 1) indicates that all six are positive. Lingering over the results for the justice-nonmaterialistic regime, it is easy to see that *CJ* is positive because in both the killing and the enslaving cases, *CJ* is the logarithm of a ratio and the numerator of the ratio is larger than the denominator. The same is true in the two status cases. The formulas in the two power cases are obviously positive. Thus, when Caesar is

killed or enslaved, under all three force-regimes, every group member becomes better-off.

– Table 1 about here –

Expressed formally, we have the first theoretical result:

Result 1 (Universal Gain from Overthrowing Caesar): *In a justice-nonmaterialistic society, a status society, or a power-nonmaterialistic society, everyone gains from overthrowing Caesar, regardless of whether Caesar is killed or enslaved.*

3.2. Does Own Rank Affect the Gain from Killing or Enslaving Caesar?

Inspecting the change formulas in Table 1, it is evident that own rank has no effect on CJ in the killing case and on CP in the enslaving case, as it does not appear in the formulas. In the other four cases we take the first partial derivatives of the change formulas with respect to i and find that the effect is negative in the justice-enslaving case and positive in both status cases and the power-killing case. Thus, holding constant group size, the gains are equal in two cases and unequal in the other four. Moreover, in the unequal cases, we find both a case where lower-ranked members reap greater gains than higher-ranked members and three cases where the opposite occurs. These results are collected in panel B of Table 1.

Expressed formally, we have the second theoretical result which we report as a set of results and which, because it is based on partial derivatives, pertains to the case where group size is held constant (including, of course, application to a single society):

Result 2 (Equal and Unequal Gains from Overthrowing Caesar, Holding Group Size Constant): The gains from overthrowing Caesar are equal in two of the six cases considered and unequal in the other four.

Result 2.1 (Equal and Unequal Gains from Overthrowing Caesar, by Type of Regime): *In a justice-nonmaterialistic society, the gains from overthrowing Caesar are equal if Caesar is killed and unequal if Caesar is enslaved. In a status society, the gains*

from overthrowing Caesar are always unequal. In a power-nonmaterialistic society, the gains from overthrowing Caesar are equal if Caesar is enslaved and unequal if Caesar is killed.

Result 2.2 (Equal and Unequal Gains from Overthrowing Caesar, by Killing or Enslaving): *If Caesar is killed, the gains are equal in a justice-nonmaterialistic society and unequal in a status society or a power-nonmaterialistic society. If Caesar is enslaved, the gains are equal in a power-nonmaterialistic society and unequal in a justice-nonmaterialistic society or a status society.*

Result 2.3 (Unequal Gains from Overthrowing Caesar, by Rank): *In the four cases of unequal gains from overthrowing Caesar, the gain is a decreasing function of rank in the justice-nonmaterialistic/enslaving-Caesar case and an increasing function of rank in a status society and in the power-nonmaterialistic/killing-Caesar case.*

If persons with greater gains are more likely to lead the mutiny or insurrection, then the higher-ranking always lead the revolution in a status society and sometimes in a power-nonmaterialistic society, but never in a justice-nonmaterialistic society. In a justice-nonmaterialistic society, the leaders of the rebellion will come from the bottom or randomly from across all ranks.

3.3. Does Group Size Affect the Gain from Killing or Enslaving Caesar?

Inspection of the change formulas shows that group size has no effect on CJ in the enslaving case, as it does not appear in the formula. In the other five cases we take the first partial derivatives of the change formulas with respect to N and find that the effect is negative in all five. These results are summarized in Panel C of Table 1.

Expressed formally:

Result 3 (Equal and Unequal Gains from Overthrowing Caesar, Holding Own Rank Constant): *The gains from overthrowing Caesar are equal in one of the six cases considered and unequal in the other five.*

Result 3.1 (Equal and Unequal Gains from Overthrowing Caesar, by Type of Regime): *In a justice-nonmaterialistic society, the gains from overthrowing Caesar are impervious to group size if Caesar is enslaved and vary with group size if Caesar is killed. In a status society or a power-nonmaterialistic society, the gains from overthrowing Caesar always vary by group size.*

Result 3.2 (Equal and Unequal Gains from Overthrowing Caesar, by Killing or Enslaving): *If Caesar is killed, group size always affects the gains. If Caesar is enslaved, group size affects the gains in a status society or a power-nonmaterialistic society but has no effect in a justice-nonmaterialistic society.*

Result 3.3 (Unequal Gains from Overthrowing Caesar, by Group Size): *In the five cases where group size affects the gains, the effect is negative, so that the larger the group, the smaller the gain from overthrowing Caesar.*

Thus, these results indicate that, with the exception of the justice-enslaving case (the case where group size has no effect), the gains are larger in small societies, suggesting that toppling Caesar is a phenomenon of relatively small groups.

3.4. Is the Gain Larger from Killing or Enslaving Caesar?

Solving the inequality within each force-regime, we find that the gains are always larger under the enslaving option. For example, in the justice-nonmaterialistic case, contrasting the gain from killing Caesar – $\ln[(N+1)/N]$ – with that from enslaving Caesar – $\ln[(i+1)/i]$ – indicates that the killing gain is always smaller than the enslaving gain. Mathematically, this is due to the

logarithmic operation, whereby $1/N$ is always smaller than $1/i$; for example, in a group of size 100, $1/100$ is a smaller quantity than $1/2$ or $1/3$ or $1/4$, etc. These results are collected in Panel D of Table 1.

Expressed formally, we have the fourth result:

Result 4 (Greater Gain from Enslaving Caesar Than From Killing Caesar): *In the three types of societies considered – justice-nonmaterialistic, status, and power-nonmaterialistic – the gain from enslaving Caesar always exceeds the gain from killing Caesar.*

3.5. If the Gain Is Always Greater under the Enslaving Option, Why Kill Caesar?

These results suggest that a plausible answer involves the desire for equality, the desire, that is, to achieve equal gains. As we have seen, equal gains are only possible in a justice society. So we may speculate that killing Caesar only occurs in a justice society and that the reason it occurs is to ensure that all group members reap equal gains.

4. DISCUSSION

Shakespeare was right. The ruler – or any top-ranked person – is vulnerable on many fronts and especially vulnerable to removal. Moreover, our results suggest that the people's gain from unseating the ruler is always positive. Thus, Machiavelli's prescription to gain the esteem of the people as a buffer against conspirators requires measures from beyond the ordinary world of sociobehavioral forces – measures to substantially offset the gain from unseating Caesar.

Our analysis indicates that although everyone gains, the gains are not necessarily equal for all group members. In one scenario – enslaving Caesar in a justice-nonmaterialistic regime – the lower-ranked reap greater gains, while in three scenarios – killing Caesar in a power-nonmaterialistic regime and always in a status regime – the opposite occurs, namely, the higher-ranked reap greater gains. There are two scenarios, however, in which all gains are equal – enslaving Caesar in a power-nonmaterialistic regime and killing Caesar in a justice-

nonmaterialistic regime.

Group size also matters, according to our results. In five of the six scenarios, the gains from overthrowing Caesar are greater in small groups than in large groups. In the sixth scenario, the gains do not vary by group size. Thus, toppling Caesar would seem to be a phenomenon of small groups – not only small societies but also small sets of conspirators.

Finally, we asked the question that has fired the universal imagination, Why kill Caesar? We established that in all three societies examined – justice-nonmaterialistic, status, and power-nonmaterialistic – group members reap greater gains from enslaving than from killing Caesar. Thus, it would seem that no insightful conspirator, no rebel who has studied the historical record, would kill Caesar. Rather, Caesar would be imprisoned or exiled, like Napoleon, or even re-educated, like the last emperor of China.

Alas, justice theory suggests a reason for killing rather than enslaving Caesar. In a justice-nonmaterialistic world, the gains from removing Caesar are equal if and only if Caesar is killed. In a power-nonmaterialistic world, remember, the gains from removing Caesar are equal if and only if Caesar is enslaved. Thus, there are in general two paths to achieve equal gains. But in a world already under the aegis of justice, only a single path to equal gains remains – killing Caesar. Thus we speculate that Caesar is killed only in a justice-nonmaterialistic regime and with the otherwise noble purpose of achieving equality.

These are all theoretical predictions, of course, and subject to empirical test. Moreover, it is important to obtain parallel results for the two other kinds of societies, the materialistic justice and power societies. If it turns out that among all five basic types of societies, only the two justice societies yield equal gains from killing Caesar, then these results provide the beginnings of a fresh interpretation of the historical record. In that long line of slain tyrants, the societies valued justice, and equality was the killers' motive. If only the justice-nonmaterialistic society yields equal gains from killing Caesar, then there is additional information about the dominance of ordinal valued goods. Further, it is important as well to obtain results for societies which combine elements of the five ideal types, as such results would place further necessary and

sufficient conditions on the links between tyrannicide and the three sociobehavioral forces.⁶ Thus, the work reported in this paper serves to highlight new directions of inquiry and to underscore yet again the long reach of the three sociobehavioral forces and the possible primacy of justice.

These results also lead to a further speculation. If everyone gains from removing Caesar, then perhaps no second-in-command or third-in-command will participate in removing Caesar, for they would themselves immediately become vulnerable to removal. The best defense against removal may well be the knowledge that mortal threat comes with the top rank, and whoever holds top rank is thereby vulnerable.

⁶ Jasso (in press) suggests that persons can be characterized by the configuration of quantitative characteristics, qualitative characteristics, and sociobehavioral forces in their identities, and societies by the configuration of elements in their members' identities. The individual's configuration is termed *personality*, and the society's configuration is termed *culture*. Jasso (in press) goes on to suggest that one of the ensuing empirical challenges is to correctly describe real-world societies in terms of these configurations of personal quantitative characteristics, personal qualitative characteristics, and sociobehavioral forces. For further discussion of the general empirical challenges that arise in testing the predictions of deductive theories, see Jasso (2004, 2006b).

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[J = justice evaluation, S = status, P = power]

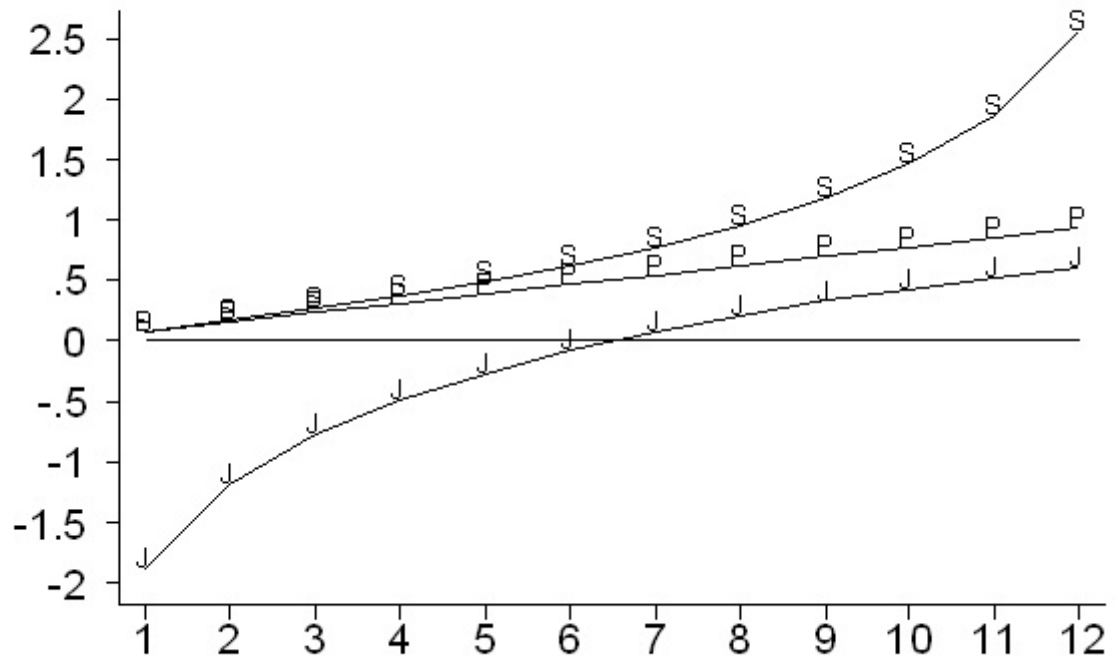


Figure 1. Justice, Status, and Power in a 12-Person Group