Status as a Valued Resource

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Abstract

While the striving for status has long been recognized in animals and in humans, there is ambiguity about the role that status plays among people in terms of their utility calculations and social interactions. We present results of a rent seeking experiment with human subjects which show that people regard status as a valued resource in itself, rather than a means to an end. Participants in the experiment played a two-stage game in which they tried to win a risky all-or-none rent. An analysis of the data established that the subjects valued status independently of any monetary consequence and were willing to trade-off some material gain in order to obtain it. Moreover, the amount of status seeking observed was different among men and women. These results help explain departures from the Nash equilibrium predicted by economic theory observed in other rent seeking experiments, and provide a natural explanation for the existence of positional goods.

It has been long recognized that humans strive not only for access to resources and material benefits but also for intangibles such as status, which is characterized by a rank ordered relationship among people. Status expresses implicit valuations of individuals by themselves or others according to some shared standard of value[1]. Besides its intrinsic interest, status seeking by individuals has large implications for social and economic systems, for it can lead to unproductive competitive races with no obvious social value, such as in the overconsumption of positional goods[2].

Evolutionary anthropologists have long identified status competition as an ancient emotional drive in our species and have also noted that in primates this behavior has roots in a general tendency toward social hierarchy[3-6]. Since evolution favors efficient competition among group members for food, mates and sleeping sites, status allows for the competition to take place with as little injury or risk of injury as possible. Status hierarchies among primates, for example, help determine which of two competing individuals would likely win an encounter without having to actually engage in a fight.

While the role of status among animals has been empirically studied for a number of years, a rather problematic issue is whether humans pursue status only as a means to an end (gaining resources), or also as a valued resource in itself. While both possibilities have been considered by sociologists, philosophers[7] and economists, the empirical evidence is not conclusive. A rather large literature, for example, has been devoted to show that when status is construed as a means to an end it can help a group function more efficiently by improving coordination, sharing responsibilities and rewarding competence[8-10]. Status can also provide a signal about product quality and thus help guide a consumer's product choice[11]. At the same time, status

represents competition, being used as a means to gain valuable resources via a better hierarchical position in society[12].

On the other side of this question, the view of status as a resource in itself has recently been formalized in economics, where some recent theoretical work sees it as a component of the utility function that people maximize[13-18]. Frank[19] has also argued that this pursuit is firmly rooted in human emotions. In particular, he argued that striving for status as a valuable resource could lead to an interesting dilemma in the form of a positional treadmill. If two workers can influence their productivity with some additional effort, the fact that status depends on their relative productivity introduces a prisoner's dilemma: although both may intrinsically prefer to work only a certain amount, the benefit of gaining the higher rank over the other may cause both to work more ("defect") and produce a higher output.

In spite of the large amount of literature devoted to the role that status plays as either a means to access resources or as value in itself, there is a lack of empirical evidence pointing to one answer or the other. While emotional reactions to reciprocal altruism and fairness have been empirically established[20-24], we are aware of only one indirect attempt to find experimental evidence for status behavior by finding correlations between individual investing preferences and stock price volatility[25].

In what follows we present the results of an experiment that directly establishes that humans do value status as a resource in itself and are willing to trade it off with consumption. The experiment was carried with subjects who had no a-priori knowledge of the fact that they were being studied to elicit the nature of status. The experimental setup consisted of a two-stage rent seeking game, based on Tullock's formulation[26], in which the participants try to win a risky all-

or-none rent. Rents, in an economic context, are special privileges than can be transferred to only some members of a group. Some examples are governmental contracts and monopoly rights (societal rents) and the allocation of departmental budgets (organizational rents). Rent seeking can be defined as the collective pursuit of such special privileges, which often result in no value added for the society. Public policy experts and political economics have long viewed rent seeking as an economically wasteful activity[26].

In the first stage of our rent-seeking game, players compete against one another to win the right to participate in a lottery held in Stage II of the game. They do so by allocating a certain amount of their budgets to that goal. In the second stage of the experiment, the winner of Stage I plays in a lottery that determines whether she receives the rent or not. The expected value of the rent that is received in the second stage of the game is a positive function of the winner's endowment remaining after rent-seeking expenditures have been made in the first stage. This forces the participants to make a tradeoff between allocating a part of their budget to influence the outcome of Stage I, or to increasing the chances of winning in Stage II.

The game was implemented as follows. Subjects were randomly assigned to groups of four, with each player receiving a predetermined number of cards (30 cards), which represented the budget to be used throughout the game. First, each player was allowed to choose how many of the cards to spend by sending the appropriate number of cards to the experimenter. The experimenter then mixed all the cards for each group together and chose one. This determined the winner of the rent-seeking game in each group. Note that the more cards a participant sends to the experimenter, the more likely he/she is to win the rent-seeking part of the game. The winner of the first stage then participated in a lottery that was held in the second stage. For this lottery, the remaining cards of the winning player were mixed with blank ones to sum to the

pre-specified total of their endowment. A random draw was then made. If the card drawn belonged to one of the players, he/she won $20. The game ended after this drawing and participants were paid privately and asked to leave the room.

In order to study the role of status seeking in this rent seeking game, we conducted two different versions of the experiment. In the first one (*No Status*), there was no status realization and the game was conducted exactly as described above. In the second version (*Status*), a status condition was introduced by stating at the beginning of the game that the winner of Stage I would be publicly announced and by encouraging the rest of the group members to congratulate him or her. The second stage of the experiment remained the same as in the *No Status* treatment.

The experiments were conducted with University of Pennsylvania undergraduate students. The number of participants was 44 in the *No Status* game and 36 in the *Status* one. Subjects were paid a show-up fee of $3 as well as their earnings in the experiment. The experiment used a between-subject design, so that no subject participated in more than one type of game, which were conducted in a classroom in such a way that the subjects could not communicate with one another.

Figure 1 shows the distribution of the rent seeking expenditures in the first stage of the two experiments, which turned out to be normally distributed in both cases. The Shapiro-Wilk test statistic indicated that both sets of results are normally distributed with a p-value greater than .05. This meant that we could use parametric tests in the subsequent statistical analysis.

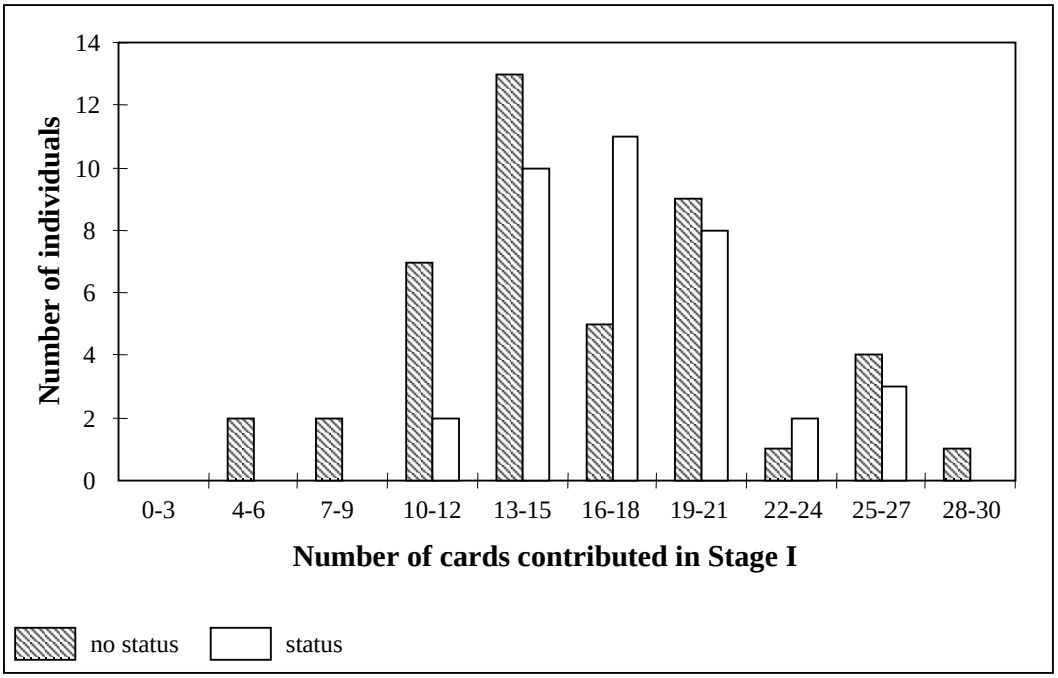

Figure 1: Distributions of Stage I Expenditures

If individuals view status as a valuable resource one should observe a higher (to the point of inefficiency) rent-seeking contribution as the status condition is introduced in the game. To test this claim we compared the overall rent-seeking contributions for the two experiments, which is presented in the last column of Table 1, with *n* denoting the number of participants. As can be seen from the table, the average contribution is 16.09 for the *No Status* treatment and 17.72 for the *Status* treatment. The t-statistic shows there is a statistically significant increase in rent seeking when a status variable is introduced ($p < .05$).

Since the only difference between the two experimental conditions is the presence or absence of a status component, these results clearly show that participants valued status independently of any monetary consequence, and were willing to trade-off some material gain in order to obtain it. Notice that the higher spending incurred in the first round of the game did not help increase the expected payoff at the end. If participants spent too much in the first round, they reduced

the expected final payoff by not leaving enough cards for the lottery in the second round. In an after-game questionnaire, 42% of the participants in the status condition explained the tradeoffs they faced as follows. On one hand, one wants to increase the chances of winning the money. On the other hand, one wants to get recognition from one's peers since "you won't get anything by losing in the first game. If you pass, you get the applause and might also get the cash". Nor did the status seeking behavior serve other purposes, such as to increase a player's reputation in the future, as the participants separated after the game was over and the result did not have any further influence on their lives. Thus, these results show that the participants valued a generally recognized status symbol, such as applause or being acknowledged.

Experiment	Contribution (Male)	Contribution (Female)	Contribution (Overall)
No Status	16.68 (4.00) *n*=25	15.31 (3.25) *n*=19	16.09 (3.67) *n*=44
Status	19.70 (2.99) *n*=20	15.25 (2.01) *n*=16	17.72 (3.41) *n*=36

Table 1: Average Rent-Seeking Contributions with standard deviations in parentheses.

In addition to an overall increase in rent-seeking expenditures when status seeking was permissible, the results displayed in the first two columns of Table I show that males and females responded to status possibilities differently. The average rent-seeking contributions for male and female participants were 16.68 and 15.31 respectively for the *No Status* treatment and 19.70 and 15.25 for the *Status* treatment. The result of the t-statistic shows that the difference between the contributions of men and women is not significant in the *No Status* treatment (p >

.05). However, when the game involves status seeking, the contributions of men are significantly higher than those of women ($p < .01$). It is clear from these results that there is a strong evidence for gender differences in status seeking. While this finding is consistent with work in anthropology and psychology[4,27,28], we could not determine whether our results are due to this intrinsic predisposition, or simply to the fact that women and men respond differently to certain status markers[*].

Our results also explain paradoxical result found earlier in rent seeking experiments conducted with subjects living in different countries[29]. It was found that the equilibrium reached in the experiment was characterized by more aggressive first round spending than in the Nash equilibrium predicted by economic theory. The fact that individuals might be seeking status and recognition can explain this finding, as "winning" in the first stage itself carries some status. In the context of rent seeking, our experiment shows status striving leads to over-investment in influencing activities, and thus inefficiency.

In summary, we have empirically shown that humans pursue status as an end in itself and that within the rules of our experiment men and women pursued status differently. As to the implications of these results beyond the determination of the nature of status, we point out that they form a basis for the existence of positional goods, whose status character adds an additional source of value to them. For some positional goods, status may be their only value.

In the context of organizations it has been recently shown that status symbols are an important determinant on organizational performance[18]. If status symbols are political they can encourage

[*] Of the five first-round male winners, three commented "nice to get applause," and none made a negative comment. Of the four female first-round winners, only one made a positive comment, and one stated "I was a bit embarrassed."

office politics, while merit-based symbols place value on contribution and group performance. Moreover, these experiments imply that people tend to overinvest resources whenever "winning against others" is involved because it carries status. If individuals seek status as a value in itself, regardless of subsequent payoffs, it may be impossible to steer an organization with resource rewards and incentive systems alone.

Finally, the integration of these behavioral economics findings with evolutionary and cognitive approaches to decision making could yield a deeper understanding of the roots of status seeking and its role in social groups. Attempts at similar integration in the animal world have already increased our understanding of the role of basic emotions in their social interactions[30], and it is therefore natural to expect similar progress in the context of human behavior and utility.

Acknowledgement. B. A. H. wants to thank INSEAD for the kind hospitality provided during the course of this work.

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