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Expectations from Unequal Rewards\*

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Both expectation-states theory and rank equilibration theory predict a "halo effect" from unequal rewards. This study used a laboratory experiment based on Berger's original design to test for performance expectations from unequal rewards. The results support the prediction: unequal rewards apparently structured corresponding inequalities in expectations and task-focused interaction. The implication of these results for equity theory is discussed.

Members of task groups expect some correspondence between their relative contributions and their relative rewards. When they anticipate the distribution of rewards to follow interaction, members form expectations for their rewards based on their relative contributions to the solution of the task. Equity theory concerns the nature of these expectations, the conditions under which they are likely to form, and the consequences of their violation (see Walster *et al.*, 1977). Also interesting is the reverse situation, when the distribution of rewards *precedes* interaction and group members anticipate their relative contributions by forming expectations based on their relative rewards. This research concerns the nature of such expectations from unequal rewards and the conditions under which they are likely to form.

Two theories informed this research: Rank equilibration theory (Kimberly, 1972) and expectations-states theory (Berger *et al.*, 1974; 1977). Both theories suggest that an actor's level of reward is a fundamental and informative basis for social discrimination. Both theories point to the conclusion that unequal rewards lead actors to form unequal performance expectations. In rank equilibration theory, this conclusion follows clearly from McCrairie and Kimberly's (1973) discus

sion of rank inconsistency. They consider the situation in which an actor's actual level of task ability is unknown. They argue that if an actor's ranks on status and reward are consistent, then through a cognitive balance process observers attribute to that actor a corresponding level of task ability and performance. If status and reward are not consistent, however, observers form conflicting expectations for the actor's level of ability and performance. This occurs because an actor's status *and rank on a distribution of rewards* provide observers with dimensions of evaluation that are associated with certain expectations for ability and performance.

The same conclusion follows from expectation-states theory. Formalized versions of the theory include characteristics of status *and reward* in the same set of elements and place them under the same restrictions in the definitions and assumptions of the theory (Berger *et al.*, 1974:177; Berger *et al.*, 1977:101). Their formal identity clearly implies that characteristics of reward and status organize interaction through the same expectation-states process. Unequal rewards, as well as unequal statuses, should lead to unequal performance expectations under the conditions specified by the theory.

Following this reasoning, I devised an experimental test based on Berger's original paradigm (see Berger and Conner, 1969). I intended to show that unequal rewards lead to unequal performance expectations and corresponding inequalities in task-focused interaction *even when there is no necessary or explicit connection between level of ability and level of*

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*reward*. In other words, I was interested in demonstrating the “halo effect” of unequal rewards (cf. Freese, unpublished). I judged the following conditions sufficient to produce such an effect: (1) a situation which enables actors to conceptualize an organized, unequal distribution of rewards, and to distinguish themselves solely on the basis of their unequal rank in this distribution; and (2) a joint task which allows actors to exchange and take into account each other’s advice, but requires the exercise of a specific ability that actors possess in unknown degrees. In accord with past expectation-states research, I considered an actor’s resistance to influence attempts an indicator of the actor’s expectation advantage and relative position in social interchange (Berger *et al.*, 1974:101).

## METHODS

Subjects were women between the ages of 18 and 21, recruited as paid volunteers from undergraduate classes of a state university. They were invited to work as members of a research organization that employs large numbers of people for data-collection purposes. The organization named was the Sociological Research Laboratory—an actual research group whose facilities were the setting of the study. Neither titles nor duties of research positions were identified, but the organized, unequal distribution of wages within the Sociological Research Laboratory was described to the subjects in some detail. This alerted subjects to different levels of reward, and since the organization was unfamiliar to the subjects, made it impossible for them to distinguish participants on any other basis. Subjects were asked to work with a [fictitious] partner on a perceptual judgment task, and were isolated in individual laboratory rooms throughout the study.

A pretest showed that subjects viewed a payment of five dollars to be considerably *greater*, and a payment of one dollar to be considerably *less* than a payment of three dollars for participation in the research. Therefore, subjects were told that the average wages paid to members of the Sociological Research Laboratory were

approximately three dollars an hour. Subjects were randomly assigned to the two experimental conditions, as follows: Subjects in the HL condition were paid three dollars and were led to believe the partner received one dollar; subjects in the LH condition were paid three dollars and led to believe the partner received five dollars. In all other respects the two experimental conditions were identical.

The differential pay manipulation was accomplished by distributing genuine (and official-looking) paychecks before the experimental task got underway. Days earlier, the subject had been called by the “Lab Secretary,” who scheduled the time of the subject’s participation, asked for the correct spelling of her name, and told the subject she could pick up her paycheck at the time of the experiment. After the subject had arrived, heard about the unequal pay distribution of the Sociological Research Laboratory, and learned that she and her partner would be working at different levels of pay, the experimenter appeared with two paychecks: one made out to a fictitious person and the other to the subject, using initials and last name. Since the situation made it plausible that the experimenter would not know the name of the subject and her partner, the experimenter *showed both* checks to the subject and asked:

Ah, let’s see, is yours the three dollar check or the \_\_\_\_\_ [five dollar, one dollar] check? Oh, okay, so this \_\_\_\_\_ [five dollar, one dollar] check belongs to your partner.

The experimenter then left, presumably to give the other check to the partner.

It is important to note that the checks were distributed at the very beginning of the experiment, and were never explicitly connected to performance on the task. Nor was the pay connected to the subject’s background or status characteristics. If the subject asked about the differential in pay, as a few did, the experimenter simply reiterated that a wide variety of people work in the Sociological Research Laboratory and some people get paid more than others.<sup>1</sup>

<sup>1</sup> It is worth noting that pay was never explicitly dissociated from performance on the task or with

The task assigned to the subject and the [fictitious] partner was to make a binary decision on a series of ambiguous problems: the length of a solid white bar superimposed on a still photograph. The photographs were presented to subjects via TV monitors in their individual laboratory rooms. After studying each slide, the partners were required to give an opinion about the correct solution, and these opinions were transmitted to each other by means of a communication signal device. The device was programmed by the experimenter to make it appear that the subject and the partner disagreed 32 times out of the 40 judgment trials. After an exchange of opinions, both partners were required to make their own final decision. If the subject refused to alter her initial judgment when she made her decision on one of the disagreement trials, she gave a “stay-response.” The likelihood of resisting influence in this situation was interpreted as the likelihood of a “stay- response.”

status characteristics. Subjects were free to imagine inequalities on both these dimensions, although only unequal performance expectations were tested in this research. Theoretical scope conditions were not violated if a subject formed expectations for status characteristics *provided* these expectations derived solely from information about unequal rewards. A postexperimental questionnaire and interview indicated whether a subject had formed conjectures based on any other information. Ten subjects were eliminated from the analysis because they believed they had actual evidence of the partner's sex. Subjects were also eliminated from the analysis if they failed to understand (nine subjects), believe (nine subjects), or cooperate with (six subjects) experimental procedures. The numbers are large, but understandable, considering the exclusion rates common in deception experiments of this kind (e.g., Cook, 1975), and considering my unselective use of the available subject pool. A great number of students in the subject pool had already learned about deception experiments (particularly Milgram's obedience experiments) in their classes; had already participated in a deception experiment; and had already been informed about this experiment from friends (particularly sorority sisters). Had I identified and disqualified these students before their participation, the exclusion rate would have been substantially lower. In any case, subjects were excluded solely on the basis of their responses to the postexperimental questionnaire and interview, *not* on the basis of their responses during the experimental task. The exclusion of these subjects does not invalidate the responses of those who did meet the theoretical scope conditions.

## RESULTS

Table 1 presents the mean proportion, mean number, and variance about the mean number of stay-responses by the 17 subjects in each experimental condition. The data clearly support the prediction that subjects in the HL condition would form higher expectations, and hence show greater resistance to influence than subjects in the LH condition. The difference in stay-responses across conditions is in the expected direction and statistically significant at the .01 probability level. The magnitude of the difference, however, is not as great as in research using diffuse status characteristics.

Whether the reward manipulation structured subjects' expectations can be checked by examining responses to a postexperimental questionnaire asking subjects to evaluate their performance on the judgment task. The distribution of subjects who indicated they had performed better, the same as, or worse than the partner differed significantly across experimental conditions: subjects were more likely to indicate better performance in the HL and worse performance in the LH condition ( $\chi^2 = 5.98$ , d.f. = 2,  $p = .05$ ;  $y = .54$ ).

Since the experiment had no control condition, it is interesting to compare the results in Table 1 with the data collected by Sell and Freese (unpublished) in their “No Information” condition. Their experiment was also conducted in the Sociological Research Laboratory using paid undergraduate women. In every respect, it was identical to the experiment reported here except for the omission of the differential reward manipulation.

Table 1. Mean Proportion, Mean Number and Variance about Mean Number of Stay-Responses by Condition<sup>a</sup>

Condition	Stay-Responses			
	Mean Proportion	Mean Number	Variance	N
HL	.67	21.41	10.95	17
LH	.56	18.00	17.65	17

a Comparison HL vs. LH:  $t = 2.55$ ,  $df = 32$ ,  $p < .01$ , one-tailed.

Subjects realized they would be paid for their participation, but did not know the precise amount nor the amount paid to any other participant. Pay was not discussed or distributed until after the experimental task was completed. Essentially, subjects had no information whatsoever about the person who was their partner on the judgment task. Sell and Freese found the mean proportion of stay-responses in their “No Information” condition was .62. A statistical comparison between the three means is, strictly speaking, not appropriate since subjects in the Sell and Freese study were not included in the random assignment procedures of this investigation. Nevertheless, the outcome of their condition—the fact that .62 falls between .67 and .56—adds some credence to the argument that subjects in both conditions of this study used the reward information to structure their performance expectations and their task- focused behavior.

#### DISCUSSION AND CONCLUSION

These results are important because they represent the first direct test of expectations from unequal rewards. Rank equilibration and expectation-states theory predict a “halo effect” from unequal rewards, but previous research in both areas failed to separate the influences of status and reward on performance expectations (e.g., McCrairie and Kimberly, 1973; Berger *et al.*, 1976). This research tested a special case of both theories, and showed that unequal rewards, in the absence of any other basis for social discrimination, structured inequalities in expectations and interaction. This occurred even though ability and reward were not explicitly related.

These results are particularly interesting because they suggest that actors who form expectations connecting the distribution of rewards to the distribution of ability, do so by expectation processes that differ according to the direction in which the expectations form. Expectations follow an equity process if actors consider the distribution of task ability known and the distribution of rewards problematic; but if the results of this study

are correct, expectations follow an expectation-states process if actors consider the distribution of rewards known and the distribution of task ability problematic. This means that the distribution of rewards, at times the source and at times the object of expectations, would follow a circular pattern in situations involving the joint operation of both processes. Actors would tend to define the actual distribution of rewards as the appropriate distribution of rewards in the absence of any clear evidence to the contrary.

Cook’s (1975) “Undefined Equity” condition is a good example. In this condition, subjects who had no knowledge of their relative task ability were given a greater proportion of rewards than their partners for work on an ambiguous joint task. Later, when the subjects themselves were given the responsibility for allocating rewards for additional work on the same task, Cook found subjects typically maintained a reward differential and allocated more to themselves than to their partners. Evidently, the unequal distribution of rewards led subjects to believe they possessed unequal levels of ability; and this, in the absence of any other information, led subjects to define an unequal distribution of rewards as the appropriate reflection of their presumed unequal ability. The result of an expectation-states process, in other words, set the initial conditions for an equity process to occur.

Such research points to the importance of rewards in the emergence and maintenance of power and prestige. Further research may show the importance of rewards in changing the patterns of social discrimination. Unlike inherent or relatively enduring properties of individuals such as age, race, sex, skill, education, etc., rewards are distributed, completely transferable outcomes. They are subject to negotiation and redistribution in a way that many bases for evaluation are not. Changing the distribution of rewards may work as a strategy for eliminating or modifying the effects of other salient bases for expectations and producing changes in the eventual distribution of power and prestige.

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Вопросы к статье

**Выберите среди предложенных ответов свой единственный и заштрихуйте соответствующий ему овал в бланке ответов на пересечении номера вопроса и номера ответа.**

1. Какой тип исследования был применён авторами статьи?
  - 1) Эксперимент
  - 2) Корреляционное исследование
  - 3) Квазиэксперимент
  - 4) Качественные методы
  
2. Выберите, пожалуйста, наиболее правильную интерпретацию следующих статистических результатов пост-экспериментального опроса « $\chi^2 = 5.98$ , d.f. = 2,  $p = .05$ » (стр. 128):
  - 1) Результаты в группах HL и LH отличаются на уровне значимости 0.05
  - 2) Результаты в группе HL выше, чем в группе LH, на уровне значимости 0.05
  - 3) Результаты в группе LH выше, чем в группе HL, на уровне значимости 0.05
  - 4) Результаты в группах HL и LH не отличаются на уровне значимости 0.05
  
3. Выберите, пожалуйста, наиболее правильную интерпретацию комментария к таблице 1: «Comparison HL vs. LH:  $t = 2.55$ ,  $df = 32$ ,  $p < .01$ , one-tailed»
  - 1) Результаты в группах HL и LH отличаются на уровне значимости 0.01
  - 2) Результаты в группе HL выше, чем в группе LH, на уровне значимости 0.01
  - 3) Результаты в группе LH выше, чем в группе HL, на уровне значимости 0.01
  - 4) Результаты в группах HL и LH не отличаются на уровне значимости 0.01
  
4. В чем автор видит основную значимость своей работы?
  - 1) в том, что удалось продемонстрировать гало-эффект неравноправных вознаграждений, нивелировав при этом воздействие социального статуса
  - 2) в том, что автор показал зависимость восприятия собственного успеха от вознаграждения
  - 3) в том, что был получен вывод о влиянии неравноправных вознаграждений на последующие ожидания и взаимодействие в группе

- 4) в том, что удалось продемонстрировать гало-эффект неравноправных вознаграждений, учтя при этом воздействие всех социально-демографических характеристик
5. Как теории, лёгшие в основу экспериментального исследования, описывают функцию вознаграждения?
  - 1) Вознаграждение выступает в них результатом социальной дискриминации
  - 2) Вознаграждение, наряду с социальной дискриминацией, выступают факторами оценки способностей других людей
  - 3) Вознаграждение связывается исключительно с уровнем способностей и может нивелировать действие социальной дискриминации
  - 4) Вознаграждение рассматривается, как фундаментальная основа для социальной дискриминации
6. Почему статистическое сравнение результатов эксперимента с результатами группы, не получавшей информацию об оплате, оказалось невозможным?
  - 1) Группа, не получавшая информацию о вознаграждении, выполняла другое задание.
  - 2) Авторы сочли, что их результатов достаточно, и проводить статистическое сравнение им показалось нецелесообразным.
  - 3) В группу, не получавшей информацию о вознаграждении, участники подбирались неслучайным образом.
  - 4) Группа ЛН в описанном эксперименте выступила в роли контрольной, а сравнивать результаты двух контрольных групп неправильно.

**Дайте развернутый ответ:**

7. Какой главный исследовательский вопрос автор ставит в предложенной Вам статье?
8. Выделите зависимую и независимую переменные в описанном экспериментальном плане.
9. Кратко сформулируйте основные выводы, полученные в исследовании.
10. Какие факторы в изложенном экспериментальном плане могли повлиять на результаты исследования и исказить их?

**2. Прочтите краткое описание каждого из исследований и дайте аргументированные ответы на приведенные ниже вопросы.**

**Тезис 1. «Четырехдневная рабочая неделя»**

You may find the prospect of a four-day workweek appealing but you will probably quickly change your mind upon learning that each day would be ten hours long. What is really needed is a combination of a shorter workday, a shorter workweek, and a higher salary. Unfortunately, should such a utopian combination ever arise, we are quite sure that college professors would be excluded from participating. Nonetheless, it is time to consider the next study.

Two researchers were able to convince the executive committee of a large manufacturing company to use two of its four manufacturing divisions (located throughout the Midwest) as experimental and control groups in a study of the four-day, 40-hour (4-40) workweek. The experimental group of 106 subjects was put on the 4-40 plan while the control group of 104 worked a normal five-day, 40-hour (5-40) week. After 13 months, one of the remaining two divisions (with 111 people) was converted to the 4-40 plan and studied for an additional 12 months. Thus, data were available over a 25-month period for two of the three groups, and for a 12-month period on the third. Dropout in the three groups was negligible.

Preliminary analyses showed the three groups to be comparable at the beginning of the

study on such measures as age, seniority, absenteeism, and salary. During the study, pretest and post-test self-report data were collected on job satisfaction, stress, and absenteeism, along with supervisor ratings of work performance. The major findings were of improved job satisfaction in the 4-40 group during the initial 13-month period (not sustained over the entire 25 months of the study), and improved productivity.

Thus, the researchers concluded somewhat tentatively that although there were short-term benefits of the changeover, these tended not to persist.

Вопросы:

1. Согласны ли Вы с тем, что проведённое исследование доказывает пользу перехода на четырёхдневную рабочую неделю? Аргументируйте свой ответ.
2. Какие альтернативные объяснения полученным результатам (повышению продуктивности и удовлетворённости работой в группе сотрудников «4-40») Вы можете предложить?

### **Тезисы 2. «Йо-хо-хо! И бутылка рома!»**

Whether deserved or not, seafaring men have long had a reputation for drinking alcoholic beverages in large amounts. Apparently, some members of the United States Navy have decided to continue this tradition as evidenced by a recent increase of interest in the development of alcohol treatment centers for naval personnel. It is refreshing to find that the navy is also interested in evaluating the effectiveness of these new programs. One such evaluation is described below.

Three researchers used a battery of personality inventories and a measure of anxiety to examine personality changes resulting from entrance into one of the alcohol treatment centers. The analysis of pretest-post-test differences on the 404 alcoholics for whom complete data were available (there were originally 424 participants, but some data were lost as a consequence of “unsystematic testing”) revealed significant positive changes on level of trust, emotional stability, and extroversion. These positive changes were accompanied by significant decreases in both pathology (depression, hysteria) and anxiety. Ratings by the (former) alcoholics’ commanding officers indicated the short-term success rate to be over 80 percent. This stands in marked contrast to the 45 percent rate of success reported before the development of special treatment centers.

These results have convinced some Navy officials of the positive effect of treatment centers.

Вопросы:

1. Можно ли на основе полученных данных считать центры по лечению алкоголизма американских моряков эффективными? Аргументируйте свой ответ.
2. Какие альтернативные объяснения полученным результатам Вы можете предложить?
3. Если Вы обнаружили недостатки в планировании исследования, опишите, как следовало бы провести его, чтобы можно было сделать достоверные выводы об эффективности (или неэффективности) центров по лечению алкоголизма у американских моряков.