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Popular Assessments of Earnings in Various Occupations

Images of Justice and Trends in Consensus

Abstract: The objective of the present article is to explore responses to survey questions concerning subjects' perceptions as to what people in various occupations do and should earn. The data come from an ongoing Polish panel study (POLPAN) and cover the period 1988–2003. The analysis is concerned with trends, if any, in consensus in the responses and the evaluation of fairness of the earnings. As for the former, individual assessments of the earnings turn out to be fairly consistent with one another. Interestingly, there is much more consensus on assessments of occupational earnings than on assessments of occupational prestige, as reported by other studies. Moreover, this consistency in regard to evaluation of earnings was increasing in the period under analysis. As regards fairness, low-status occupations tend to be perceived as increasingly underrewarded, and high-status occupations as increasingly overrewarded. Recommendations as to future research on this topic are given in the closing section.

An important part of research on social stratification deals with popular beliefs concerning what is, and what is not, fair. The problem can be approached in several ways, one of which is to ask participants in a survey to express their opinion on such issues as income differences, minimum wage, welfare, or taxes. Typically, the respondent's task is to indicate how much he or she agrees with some statements read out by an interviewer, such as "Income differences are too large" or "Inequality continues to exist because it benefits the rich and powerful." The answers to such questions can then be combined to obtain some summary measure of fairness in the minds of the respondents. The underlying assumption here is that the subjects

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have their own concepts of *justice*, or fairness, which are “activated” when they are faced with questions regarding the aforementioned issues. Therefore, it is believed that answers to such questions reflect people’s perceptions of justice.

In the present article, I take another approach, however, which consists of looking closely at popular perceptions of earnings in a number of occupational groups, as reported by subjects in a survey study. The subjects are asked what they think members of certain occupations *do earn* and what they think people in these occupations *should earn*. Responses to the former question provide a researcher with individual estimates of *perceived actual earnings*, whereas the responses to the latter item constitute individual assessment of *fair earnings*, also called “just” or “deserved” earnings (see, e.g., Jasso 2007).

These assessments figure prominently in sociological and sociopsychological studies on distributive justice, or investigations of outcomes of the process by which rewards and burdens are distributed among members of a group.¹ To be able to retrieve norms underlying these assessments from the survey responses, one usually makes, implicitly or explicitly, a number of assumptions (Osberg and Smeeding 2006). First, one tends to assume that each subject has a “representation” of a typical member of the occupations under study in terms of socially meaningful categories, such as those based on differences in formal education, skills, gender, age, and the like. Second, the assumption that with each such *dimension of differentiation* are associated *socially validated* and *socially shared* beliefs that “describe what is thought to be the usual association between a valued characteristic and levels of rewards . . . the source of such beliefs is the culture that is part of the larger collectivity of which interactants are part, such as an organization, a subculture, or the larger society” (Berger and Webster 2006: 272). These beliefs are called *referential structures*.²

Three types of referential structures can be distinguished: (a) categorical structures, (b) structures based on ability, and (c) structures based on accomplishments. What differentiates one type of structure from another is the type of characteristic, or “quality,” that is associated with levels of rewards. In categorical referential structures, the quality in question is membership in a broad social category; in the case of ability referential structures, it is the amount of skills or competence for dealing with tasks of a certain kind. Finally, in referential structures based on accomplishments, the relevant characteristic is the level of achievement.

The basic theoretical argument is that once these various referential structures are activated in a social situation, subjects combine these structures to arrive at *reward expectations* for themselves and for others (Berger et al. 1985); and this is still another assumption required for interpretation of the responses to the “do-earn” and “should-earn” questions. The reward expectations are important because they affect the actual distribution of rewards. In turn, the distribution is likely to lead to differential *performance expectations*, which, in turn, translate into behavior. In other words, the distribution of rewards among members of a group affects expectations regarding performance such that those with high levels of rewards are

expected to do well, while those with low levels are expected to do poorly.

Thus, in order to be able to fully investigate implications of these assumptions, one requires information on the individual representations of the occupations. In studies that make use of “vignettes” (Jasso 2006a), this information is explicitly “manipulated” by a researcher who provides respondents with a series of descriptions of fictitious persons. These descriptions are in terms of gender, age, occupation, years of schooling, and earnings and the subjects’ task is to rate the extent to which these earnings are fair given the other characteristics. Then, using certain theoretical arguments from comparison theory (Jasso 2006b), just earnings are estimated for each of the fictitious persons and linear models are used to study the effects of the above-mentioned variables on the estimated just earnings (see, e.g., Jasso and Webster 1999).

Unfortunately, general social surveys, which often ask respondents the “do-earn” and “should-earn” questions, do not follow the vignettes-study design and they also fail to make an effort to elicit information on the individual representations of typical members of the given occupations by other means. Hence, these social-survey data on those occupations, even if they contain subjects’ estimates of earnings, both perceived and fair, allow for only limited analyses of patterns, if any, in these estimates.

But even if they are only limited, such analyses can still provide important insights into popular beliefs about inequality and justice of earnings. First, by studying properties of distributions of these estimates one can ask about how consensual these beliefs are. Arguably, the more variation there is, the less consensual they are. Note that it is possible to ask two types of questions in regard to the consensus:

1. Given the estimates of earnings in a particular occupation, is there more consensus in regard to perceived or just earnings?
2. And, given the estimates of a particular type of earnings, which occupation receives the most consensual estimates?

Second, by correlating estimates provided by individual respondents, one can ask about the degree to which these estimates agree, which is another way of looking at consensus in the perceptions of earnings. The degree of agreement in the individual assessments of earnings can be expected to differ depending on the type of earnings to estimate. Arguably, perceived earnings are likely to be shaped by social interaction with members of the occupations of interest. Clearly, this experience is likely to be dependent upon the social-occupational categories of the respondents themselves in the sense that social interaction is subject to the effect of homophily (McPherson, Smith-Lovin, and Cook 2001). But this is not the issue. Even if social interaction is concentrated within occupations, it is still possible that respondents’ perceptions will agree in terms of ordering of the occupations in regard to earned income. In turn, the fair earnings can be said to be “generated” by norms of justice and, because there is a variety of such norms, one can expect less agreement on estimates of just earnings than perceived earnings.

To be sure, this conjecture is an oversimplification, as there are other important factors that can be hypothesized to influence responses to the “do-earn” and “should-earn” questions and these factors include the situation of the survey interview itself. The respondents are asked the “do-earn” questions first, and the “should-earn” questions later. Responses to the latter items may anchor on responses to the former, an illustration of the familiar “primacy effect” (Sudman, Bradburn, and Schwartz 1996). Further, the assessments of the perceived earnings depend not only on patterns of social interaction but also on more general knowledge about the society, which derives from formal education and probability of exposure to information about the structure of earnings, as distributed by the authorities or the media. Finally, some respondents are likely to base their judgments regarding average incomes in various occupations *on what they themselves earn*. That is, the subjects are likely to anchor their judgments on their own income, so that estimates for particular occupations will be focused around their average monthly wage. I explore some of these possibilities below.

Third, it is important to compare assessments of the perceived and deserved earnings because such comparisons result in evaluations of *the justice of earnings*. A natural question to ask is, “Which of the occupations under study are seen to be justly rewarded and which are seen to be unjustly rewarded?” And, with regard to the former, “Which are underrewarded and which are overrewarded?” Investigation of the assessment of fairness of earnings can be used to speculate on the types of qualities that are valued in the society that the respondents represent.

Concepts and Measures

Variability and Consensus

Intuitively, consensus is about agreement. More specifically, a group can be said to be consensual in regard to norms, values, beliefs, practices, or procedures to the extent that its members agree on a particular norm, value, belief, practice, or procedure. But beyond that common-sense understanding, the concept of consensus is somewhat problematic. As Zelditch and Floyd put it, “If it means the number who agree, then it is unclear how many must agree. If it also means the number of norms, values, beliefs, practices or procedures it is unclear with how many of them the population must agree” (1998: 339). Accordingly, there has been much debate lately concerning the foundations and consequences of consensus for social order (for an overview, see Zelditch and Floyd 1998; and Zelditch and Walker 2003). A major postulate in this discussion has been that consensus is a condition of the legitimacy of social systems (Zelditch 2001). In particular, it is claimed that if an element of a social system is consensually accepted as valid, it induces compliance in the members of the social system, and their compliant behavior contributes to the stability of the system (Thomas, Walker, and Zelditch 1986; Walker et al. 1991; Walker, Rogers, and Zelditch 1988; Walker, Thomas, and Zelditch 1986; Zelditch and Walker 1984).

In the present article, my concern is less a detailed study of the process than the properties of popular perceptions of social inequality. Therefore, I will not elaborate on the issue of the meaning of consensus for the stability of reward distributions until later. For now, I focus on how to capture the degree of consensus empirically. If, as suggested above, the meaning of consensus is that members of a group agree on an issue, then one can take at least two different approaches to measuring consensus in the popular assessments of earnings in various groups. First, one can ask about the extent to which *assessments of earnings in a particular group* agree with one another. Second, one can ask about the extent to which *the structures of earnings*, as estimated by individual subjects, agree with one another. In the former case, one is essentially asking about *variability in the assessments* as the inverse measure of consensus. In the latter, one is asking about the degree to which *assessments of various subjects are associated*.

Many different measures of variability can be used in the present context, but not all of them are equally suited for this purpose. In order to be able to measure the amount of variability in the individual perceptions of earnings in an occupational group at various points in time, one needs an index that is insensitive to the unit of measurement. Most indexes of inequality, which can be said to measure variability as well, satisfy this requirement, but they are based on the assumption that what is estimated is inequality in some resource whose *fixed amount* is being distributed among members of some group. But when estimating the variability in individual perceptions of earnings in an occupational group, one is obviously not considering inequality in a good that is distributed among members of that group; rather, one is estimating the extent to which the perceptions depart, on average, from some “central tendency.” For this reason, I employ the familiar *coefficient of variation* as the inverse measure of consensus. The coefficient is defined by the following equation:

$$cv = \frac{D(X)}{E(X)}, \quad (1)$$

where the term in the numerator denotes the standard deviation of the variable X , while the term in the denominator denotes its mathematical expectation.

However, as indicated above, another approach can be taken to measuring consensus. The alternative approach consists in choosing two subjects, i and j , computing the correlation between the estimates of earnings provided by these subjects, repeating this operation for all possible pairs of individuals in the group, and then averaging the results. This approach builds on work by James Balkwell et al., who wrote:³

Imagine . . . a society with N members. Suppose that two individuals, A and B , were selected at random from the society, and that each was asked to evaluate [earnings in] each of a representative set of occupations found in the society. The question is: Would the evaluations of A and B agree? Let us rephrase the question so as to make it more amenable to a quantified answer: Would a measure of

agreement have a relatively high value or a relatively low value? Let Ψ be an appropriate measure of agreement, and suppose it is calibrated so that perfect agreement is signified by $\Psi = +1$, chance agreement by $\Psi = 0$, and perfect disagreement by $\Psi = -1$. Then, were there no collective (or shared) consciousness of occupational evaluations, the expected value of Ψ would be zero. That is, if A and B used wholly unrelated sets of criteria—truly idiosyncratic criteria—then their evaluations would be neither positively nor negatively related. On the other hand, if they employed identical—or empirically interchangeable—sets of criteria, then their evaluations would be highly, perhaps even perfectly, correlated.

Since Ψ pertains to a random pair of individuals, it is a random variable; thus, it has an expectation (in the mathematical sense). What we wish to suggest is that $E[\Psi]$ provides a reasonable formalization of the intersubjectivity of [earnings] evaluations. It indicates the extent to which evaluations are shared rather than unique . . . In a social system perfectly integrated with respect to [these] evaluations, one would find $E[\Psi] = 1$. In a social system wholly unintegrated with respect to [the] evaluations, one would find $E[\Psi] = 0$. Given that individuals A and B are equally likely to be any pair of individuals from the society, $E[\Psi]$ is simply the arithmetic mean of the $N(N - 1) / 2$ Ψ -values associated with the $N(N - 1) / 2$ distinct pairs of individuals. (1980: 869)

Subsequently, the authors go on to propose Pearson's product-moment correlation as the measure of association (Balkwell et al. 1980: 870), so that

$$E[\Psi] = \frac{2}{N(N-1)} \sum_{i=1}^N \sum_{j \neq i}^N \Psi_{ij}, \quad (2)$$

where Ψ_{ij} denotes Pearson's correlation between estimates of earnings provided by subjects i and j .

Justice-Evaluation Function

In the study of popular "images" of distributive justice, the crucial question is one about how to translate the responses to the "do-earn" and "should-earn" questions into a quantity denoting the assessment of justice of income received by members of some social group. Many solutions to the problem can be found in the literature, but in the present article I employ only one of them, namely, the justice-evaluation function proposed by Guillermina Jasso.⁴ The function is written as follows:

$$J = \theta \ln \frac{A}{C}, \quad (3)$$

where J means justice evaluation, A denotes actual (or more precisely, perceived) reward, C denotes the level of the reward believed to be fair, whereas θ is a certain parameter relating to characteristics of the actor making the justice evaluation, which is ignored in the remaining discussion, since, from the point of view of the current study, the parameter is of little importance.⁵

The justice-evaluation function, as defined by the above formula, has a number of interesting and desirable properties.⁶ First, it is scale-invariant. Second, the func-

tion is easy to interpret—it assumes the value of zero in the case of perfect justice, that is, when income actually received by a person is equal to what is believed to be just income for that person. Negative values of that function indicate the case of underreward, that is, the situation in which a given person obtains less than he or she deserves. And finally, positive values of J indicate the case of overreward. Third, as Jasso puts it, the function quantifies “the common human experience that deficiency is felt more keenly than comparable excess” (2005: 20). In other words, the fact that I earn 1,000 PLN more than I believe I deserve makes me feel inconvenient, but this inconvenience is not as great as it would be if I earned 1,000 PLN less than I think I should.

When a subject makes judgments concerning rewards received by a group of people, the subjects’ overall justice evaluation (which I denote by JJ) can be obtained by averaging the evaluations for each group member (Jasso 1999):

$$JJ = E(J). \tag{4}$$

This summary index can then be decomposed into two components: (a) justice evaluation based on the comparison of the actual mean of the reward distribution with its just mean, JJ_{mean} and (b) justice evaluation based on comparison of the actual inequality in the reward distribution with a just inequality, JJ_{ineq} :

$$JJ = JJ_{mean} + JJ_{ineq} = \ln \left[\frac{E(A)}{E(C)} \right] + \ln \left[\frac{1 - I(A)}{1 - I(C)} \right], \tag{5}$$

where $I(A)$ and $I(C)$ are measures of inequality in the actual and just distributions, respectively. The particular measure used in the above formula is a special case of the familiar Atkinson index of inequality (see Jasso 1982 for a discussion). This measure is expressed as one minus the ratio of geometric mean to arithmetic mean:

$$I(X) = 1 - \frac{E_G(X)}{E(X)},$$

where $E_G(X)$ denotes the geometric mean. This decomposition is designed to answer the questions of which contributes more to the subject’s overall perception of injustice: the fact that the actual mean is below the fair one or the fact that the actual inequality is above the fair one. An interesting property of the decomposition is that a perception of perfect justice may in fact be produced by two types of injustice that cancel each other. Consider, for instance, a group whose members make unequal contributions to the solution of a task the group is working on and yet everyone is rewarded equally for their contributions. In that group, the average reward may be fairly large with no dispersion in the reward distribution. As a result, an observer may conclude that the average reward exceeds what it should be because some of the group’s members receive too much relative to what they deserve for their contributions and, for the same reason, the actual inequality in the group does not reflect adequately, the fair inequality. If, additionally, departures from the point of perfect justice are of equal magnitude in both cases, they will

balance one another, so that the overall justice evaluation, as captured by *J*, will equal zero, the point of perfect justice.

Data and Analysis

The data used in this analysis are taken from the POLPAN panel study. As explained above, respondents in the study are asked what they think people in various occupations do earn and what they think people in these occupations ought to earn. The “do-earn” and “should-earn” questions were repeated in all waves of the POLPAN survey except for the last one. Hence, we can analyze how individual assessments of earnings changed over the period 1988–2003 only, instead of the whole period covered by all POLPAN waves. Also, the list of occupations whose earnings were assessed by the respondents changed from one wave to another—not only in regard to which occupations were included on the list but also in regard to how many of them were included. In the first wave of the panel, the list comprised eleven distinct occupational titles, but in 2003, when the POLPAN participants were asked the “do-earn” and “should-earn” questions the last time, there were only six titles on the list. Overall, there are five occupations whose earnings—both perceived and postulated—were assessed by the respondents in all waves of POLPAN in which the relevant items were included. The five occupations are medical doctor in general practice, owner of a small shop, manager (director) in a large enterprise (or factory), unskilled worker, and minister in a national government ministry. The data analysis was carried out using the statistical package R (R Core Development Team 2011).

Proportions of Don't Knows

Table 1 lists all of the occupational titles that were contained in the “do-earn” and “should-earn” questions in consecutive waves of the POLPAN study. The table also reports the proportions of respondents who were not able to provide their estimates of earnings in the listed occupations (“Don’t know,” abbreviated “DK,” responses). The proportions were computed after missing data (resulting from, for instance, refusals or study design⁷) had been excluded. Because in 1998 the DK responses to the “do-earn” and “should-earn” questions were coded the same way as missing data, providing the appropriate figures for 1998 was not possible. Note, however, that the 1998 and 2003 questionnaires used the same list of occupations.

As Table 1 shows, the proportions of DK responses tend to get smaller with each wave of POLPAN. To the extent that these proportions can be interpreted as reflecting “difficulty” of the survey items, the numbers in Table 1 suggest that the “do-earn” and “should-earn” questions were becoming easier for respondents with each repetition of the study. This finding may not be very surprising, at least as far as the former questions are concerned. After all, information about average monthly wages in various occupations became more readily available for everyone

Table 1

Proportions of “Don’t Know” Responses to Do-Earn and Should-Earn Questions for Consecutive Waves of POLPAN

Occupation	1988		1993		2003	
	DE	SE	DE	SE	DE	SE
Bank clerk	0.24	0.19	n. a.	n. a.	n. a.	n. a.
Bricklayer	0.18	0.16	n. a.	n. a.	n. a.	n. a.
Bus driver	0.21	0.17	0.14	0.09	n. a.	n. a.
Director in a large enterprise	0.19	0.18	0.13	0.11	0.03	0.03
Doctor	0.22	0.16	0.12	0.07	0.02	0.02
Factory owner	n. a.	n. a.	0.24	0.22	0.04	0.05
Farm worker	0.25	0.23	n. a.	n. a.	n. a.	n. a.
Minister in a national government	0.28	0.23	0.12	0.09	0.03	0.02
Secretary	0.20	0.18	n. a.	n. a.	n. a.	n. a.
Secretary in a private firm	n. a.	n. a.	0.13	0.10	n. a.	n. a.
Secretary in a state firm	n. a.	n. a.	0.17	0.13	n. a.	n. a.
Shop assistant	n. a.	n. a.	0.11	0.09	n. a.	n. a.
Shop owner	0.26	0.22	0.17	0.13	0.03	0.03
Skilled worker	0.15	0.14	0.08	0.06	n. a.	n. a.
Unskilled worker	0.18	0.16	0.10	0.07	0.03	0.02

Notes: n.a.—not available for the given wave of POLPAN; DE—“does earn”—pertains to perceived earnings; SE—“should earn”—pertains to just earnings.

after 1989, as it was distributed by the media and Central Statistical Office. My argument is not that the subjects have complete knowledge of the amounts earned in various occupations, but that they are aware that this information is not hidden from them and if it is not hidden from them, then the task of estimating the earnings cannot be all that difficult. Therefore, the questions asking respondents to estimate actual and just earnings in some occupations might have come to be seen as easier than they had been before. To be sure, the fact that information on the structure of earnings by occupation has become available for everyone does not necessarily mean that subjects’ perceptions of the earnings are accurate.

The decreasing trend in the proportions of DK responses applies to the “should-earn” questions as well, which, however, cannot be explained by greater availability of information on actual earnings in various occupations. This is because, as explained earlier, the assessments of just earnings are based on private conceptions of justice rather than precise knowledge of the actual wages. Another process could have come into play, however. Substantial empirical evidence shows an increase in

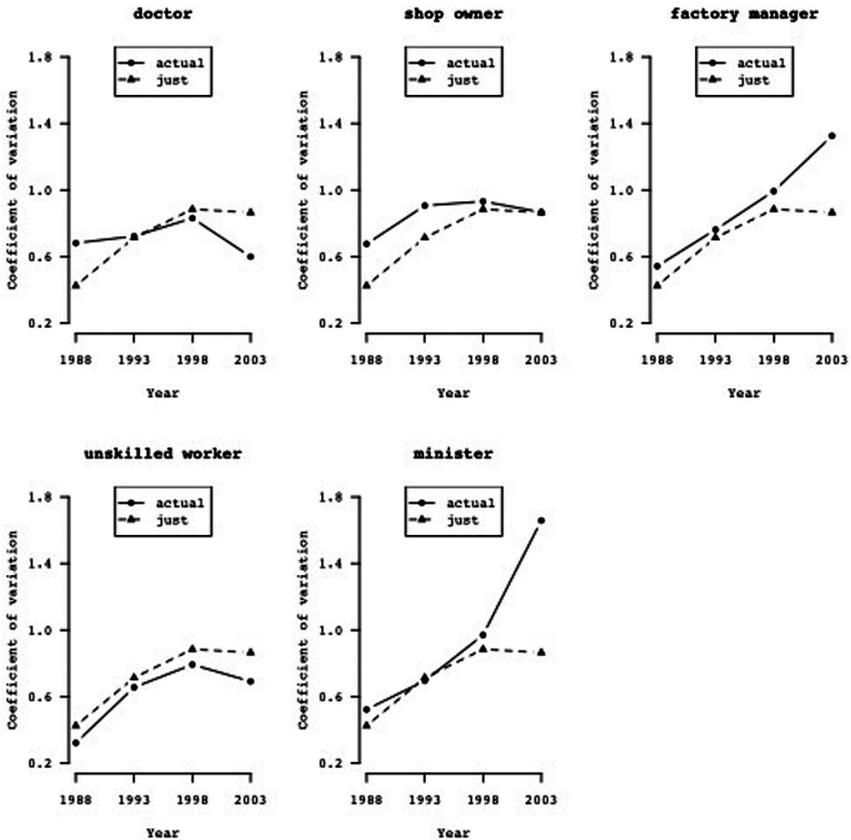
the relationship between occupation and education as well as earnings and education since 1989 in Poland (for empirical evidence, see Domański 2011). In other words, it has become easier to “predict” what kind of job individuals do and how much they earn, given information about their education. To the extent that Polish citizens were aware of this increasing association, they could have used it as a basis for inference regarding deserved earnings. That is, by observing that people with higher degrees of education end up performing more respected and better-paid jobs than people with poorer education, citizens may have concluded that this is the way things ought to be and based their estimates of deserved earnings in the occupations under study on precisely this judgment.

Variability and Consensus

If this conjecture is correct, then some implications follow regarding the degree of consensus in these estimates. To the extent that the information distributed by the media regarding earned income in various occupational groups is seen as accurate and the increase in the strength of association between occupation, education, and income is believed to be a matter of objective fact, the assessments of both perceived and just earnings can be expected to have become more and more consensual. In Figure 1, the values of the coefficient of variation are plotted for each of the five occupations under study, and for each wave of POLPAN, to determine whether this conjecture has any merit. At first sight, the patterns in Figure 1 seem to contradict it. Let us start with variation in the perceived earnings. As regards factory director and minister, the variation goes up steeply with each POLPAN wave; in the case of the other three occupations, it grows initially, but then starts to decline somewhat. As for the just earnings, the general picture is much the same, although there are more irregularities in the patterns displayed by the data. Nevertheless, there seems to be nothing in the data to suggest that the assessments of earnings were becoming more and more consensual.

However, before the above conjecture is discarded, let us consider the following interpretation. A well-established fact concerning the structure of incomes in Poland after 1989 is a continuous increase in inequality (see, e.g., Kumor 2009). That is, the average difference in earned income has become wider since the demise of communism. When people face the task of estimating earnings in a number of occupations, they can base their judgments on various sources, including, as indicated, information distributed by the media or the authorities, information obtained in the course of social interaction, and their own job or household income. In the latter case, the estimates provided by low earners are likely to be anchored on smaller amounts and the estimates provided by high earners are likely to be anchored on larger amounts. If the average difference in earnings is widening, it may account for why the variation in the subjects’ assessments of perceived and postulated earnings is becoming greater, at least in the case of some of the occupations under study. Thus, by dividing the subjects according to their income, we can expect the

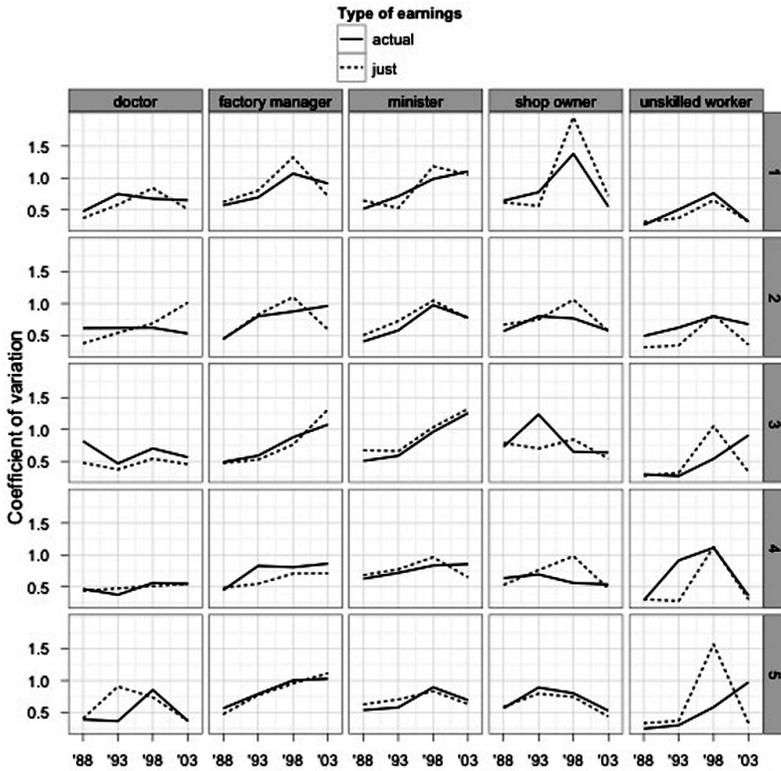
Figure 1. Variations in the Assessments of Earnings



variation in the assessments to be smaller (and thus the consensus to be greater) within particular classes, or strata, than in the whole sample.

Visual inspection of Figure 2 suggests, however, that this refined conjecture has little merit. This figure shows how the variation in the assessments of earnings changed over time within quintiles of earned income. The graphs in Figure 2 are arranged in a 5×5 matrix, so that rows of the matrix pertain to the quintile groups and columns to occupations whose earnings are evaluated by the survey participants. As one can see, there is no regular trend in the data. Importantly, it cannot be concluded from the patterns displayed in Figure 2 that variation in the amount of variation in the assessment of earnings decreased over time. In general, to the extent that the coefficient of variation does measure the consensus (or rather dissensus) in a valid manner, we are led to conclude that, in the period under study, the consensus in the individual evaluations of earnings did not follow a declining trend.

Figure 2. Variations in Assessments of Earnings by Quintile of Income



We now turn to the other measure of consensus, the average value of the correlation coefficient between individual estimates of earnings in the five occupational groups under study, denoted by $E[\Psi]$ above. Table 2 summarizes the results of the analysis. For each pair of respondents, their estimates of earnings were correlated and then averaged. Because some respondents failed to estimate the earnings in at least some occupations, the data set contains a number of missing cases, as explained above. In order to deal with the missing cases, pair-wise deletion was applied.

The figures in Table 2 essentially speak for themselves and I do not think it is necessary to elaborate on them here. Wave by wave, a systematic increase in the consensus can be observed in the assessments of both the perceived and just earnings. That is, the participants in the POLPAN study come to agree more and more in regard to ordering of the occupations with respect to how much their members actually earn as well as how much they ought to be paid. This is in line with the conjecture formulated above.

That the measures covary says nothing about the causal relationships between them, so we cannot infer from the contents of Table 2 whether it is the increase

Table 2

Mean Values of Pearson's Correlation Coefficient Between Individual Assessments of Earnings

	Perceived earnings	Just earnings
1988	0.737	0.607
1993	0.766	0.679
1998	0.806	0.710
2003	0.816	0.731

Note: Missing values were removed by means of pair-wise deletion.

in agreement concerning the perceived earnings that affected agreement on the just earnings, or vice versa. This problem could be investigated more closely in a separate study. But another finding is worth mentioning here. The values of $E[\Psi]$ for the estimates of perceived earnings exceed the values of $E[\Psi]$ for fair earnings in each wave of the panel study. In other words, individual perceptions of “what is” agree more than individual beliefs in “what ought to be.” A possible interpretation of this finding is that the perceptions are based on more-or-less similar sources of information, but the beliefs are rooted in individual conceptions of justice, that is, conceptions relating qualities perceived in the occupations whose earnings are being evaluated with deserved levels of rewards. If there are smaller differences among individuals regarding the sources of information on which to base the perceptions of actual earnings than regarding the conceptions of justice producing the estimates of the just earnings, then it is natural to expect that the consensus with respect to the former variable is greater.

Even if there are differences among the subjects concerning the norms of justice they employ in making the evaluations, it is interesting to note that agreement on these evaluations increases over time, suggesting that society is becoming increasingly integrated as to the understanding of justice in the distribution of occupational rewards.

Note that this finding is at odds with results of the study by Henryk Domański, Zbigniew Sawiński, and Kazimierz M. Slomczynski (2010) who found that consensus in the individual evaluations of occupational prestige is declining. These strikingly contradictory patterns of findings suggest that perceptions of prestige and perceptions of earnings have different bases and involve different processes, even if this conflicts with the intuition that both prestige and earnings are socially valued rewards, so that changes in both should follow similar trends. But one should be very careful here. Studies of occupational prestige usually employ larger “samples” of occupational titles than studies of occupational earnings. For instance, in the Polish edition of the fourth round of the European Social Survey,

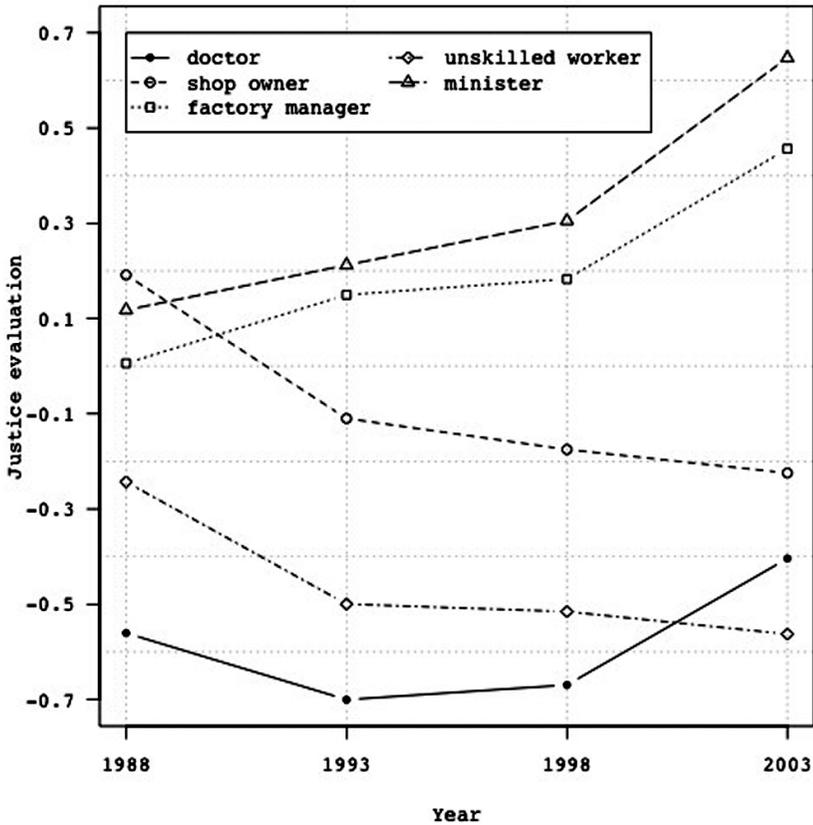
a block of questions was added concerning evaluations of occupational prestige with the list of occupations containing as many as twenty-two items. In turn, the longest list of occupational titles used in the “do-earn” and “should-earn” questions in the POLPAN study contained eleven positions. Furthermore, the subjects are free to give any nonnegative number they please in response to the “do-earn” and “should-earn” questions, but they are forced to choose a number from 1 to 5 when replying to the prestige items. These differences in the methods of measurement may account for some of the observed differences in the degrees of consensus. A test of this conjecture is left for another study.

The conclusion that can be drawn from the above results is that the subjects’ perceptions of the actual and just earnings differ widely as to amount, but they are quite similar in regard to the structure, or hierarchy. At this point, we should clarify why it is important that so much attention be paid to the issue of consensus and agreement in the popular estimates of earnings. If perceptions of earnings in various occupations are consensual *and subjects are aware of this fact*, then these earnings become legitimate, or “valid,” in the eyes of the subjects. This hypothesis is based on legitimacy theory, which has long recognized that consensus is a condition of legitimacy (see Zelditch 2001; Zelditch and Floyd 1998; Zelditch and Walker 2003). In other words, if people’s judgments concerning earnings in a number of occupations are consensual—and if people are aware that their judgments are consensual—they are likely to come to view the earnings, and, importantly, the differences between the earnings, as legitimate, justifiable, and acceptable, in accord with what the earnings ought to be, and if people perceive the earnings to be legitimate, they are likely to refrain from any action or movement aimed at changing these earnings, and to discourage others from taking part in any such action. Further, because consensus is characteristic of collectivity rather than individuals, it is conducive to legitimacy *at the collective level*. That is, people come to see the distribution of earnings as legitimate not because they find the distribution to fit their own personal and idiosyncratic conceptions of what ought to be, but because they take into account what others think and anticipate others’ reactions. Under such conditions, it is even possible that they come to accept a distribution they personally disapprove of, because collectively established legitimacy is more important for stability than individual-level legitimacy. Experiments have shown that individual legitimacy (one’s own beliefs concerning the appropriateness of distribution) is neither necessary nor sufficient for the stability of income distribution. Detailed investigation of consensus on popular estimates of earnings in various occupations may therefore contribute to our understanding of reactions to inequality and injustice.

Justice Evaluations

Figure 3 graphs curves representing “trends” in evaluations of the justice of earnings in the five occupations under study. An interesting feature of the graph is a similarity in the trends for minister and manager, on the one hand, and shop owner

Figure 3. Average Evaluations of the Justice of Earnings



and unskilled worker, on the other. In the case of the former pair, the trends are roughly parallel and fairly close to one another. The trends in the latter pair are parallel as well, but there appear to be greater differences in terms of the average justice evaluation between the two occupations. Further, the trends within each pair are also similar in a different sense: the average justice evaluations of earnings of minister and manager are increasing, whereas the evaluations for shop owner and unskilled worker are decreasing with each wave of POLPAN. That is, minister and manager are seen, on average, as more and more overrewarded, while unskilled worker and shop owner are perceived to be more and more underrewarded. If we were to classify the former two occupations as well-paid jobs and the other two as poorly paid, then the patterns in Figure 3 suggest that earnings in the well-paid jobs are assessed as increasingly departing from the point of perfect justice in the

direction of overreward, while earnings in the poorly paid occupations are viewed by the average respondent as departing more and more in the direction of underreward.

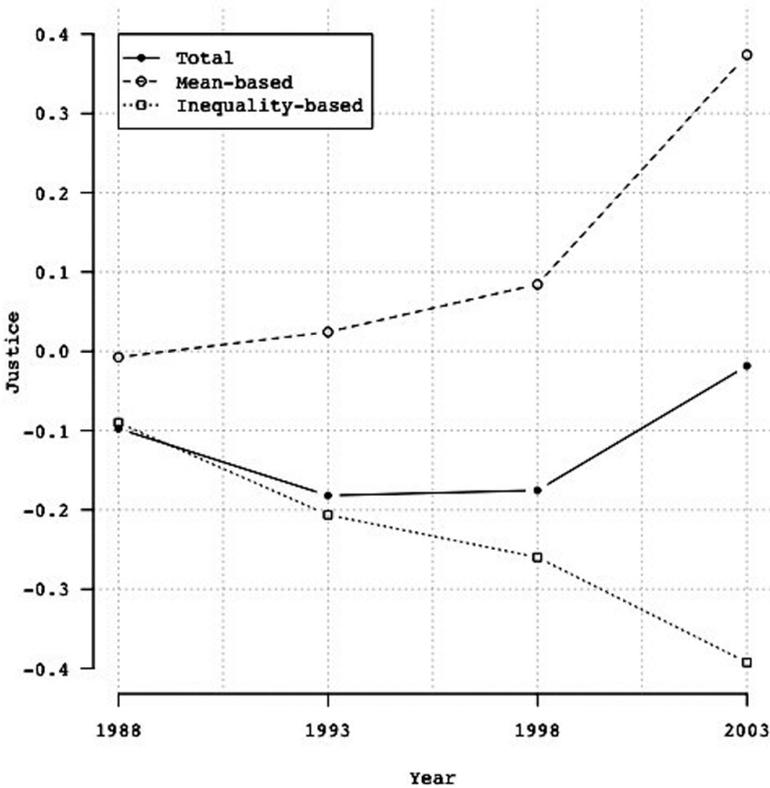
When it comes to assessments of the justice of income earned by doctors (general practitioners), the trend in these assessments seems to be a kind of “combination” of trends in evaluations of the justice of earnings in the two groups of occupations distinguished above. That is, the trend regarding earnings of doctors somewhat resembles the trend for poorly paid jobs in the initial phase of the panel study. Then, after 1993, it starts to follow trends characteristic of the well-paid occupations. With only four measurements for each occupation, it is unwise to come up with any general claims concerning these trends, but if this conjecture is correct, it suggests that, around 1993, a change might have occurred in the way doctors are perceived, or, more precisely, in the way the qualities or characteristics associated with the job of a general practitioner are perceived.

We now shift our focus from assessments of justice of earnings within particular occupations to assessments of how much injustice there is in general in the eyes of respondents. This can be done by applying Equations (3) and (4) to the individual evaluations of both perceived and just earnings submitted by the respondents. In this way, we obtain a value of the summary justice index, which can then be decomposed into two components specified in the “Concepts and Measures” section above. Note, however, that the interpretation of the summary index and its components is limited to the amount of injustice experienced when estimating earnings in the occupations under study and should not be mistaken for a measure of perception of the amount of injustice in the whole society. In other words, it would be unwise to make definite conclusions about individual beliefs concerning the fairness of earnings distribution in Poland based on the limited design used in POLPAN. Nevertheless, even this limited design provides us with important insights whose validity may be investigated more closely in a study with a more sophisticated design.

First, changes in the average value of index J_I follow a U-shaped pattern. This is clearly visible in Figure 4 in which the changes were graphed using a solid line. Note that there is some correspondence between these results and those discussed in the preceding paragraphs. Perceptions of the justice of earnings are relatively stable between 1993 and 1998 with some significant changes taking place in the periods 1988–93 and 1998–2003.

Second, even if changes in the overall justice perception suggest that, after an initial decline, perceptions of justice of earnings were coming closer and closer to the point of perfect justice, the results of the decomposition given by Equation (5) reveal a surprising finding—an increasing discrepancy between mean-based injustice and inequality-based injustice. As regards the former, the respondents tend to believe that the mean earnings exceed what would be the fair mean level of earnings, so that, on average, the members of the five occupations are perceived to be overrewarded. This observation holds for all waves of POLPAN except for the first

Figure 4. Average Evaluations of Injustice by the Type of the Injustice



one, when the mean value of JI_{mean} is marginally below the point of perfect justice. Thereafter, the value rises quite rapidly. As regards inequality-based injustice, the inequality in earnings of the typical members of the five occupations is seen as exceeding the acceptable level.

Third, at the first three time points it is inequality-based injustice that appears to account for most of the overall feeling of injustice: the mean value of JI_{ineq} is much closer to the mean value of JI than is JI_{mean} . But in 2003 this changes—the impact of both components on the overall index is of nearly equal strength, so that inequality-based injustice no longer dominates mean-based injustice.

The finding seems intriguing, but, once again, much caution is required before making any generalizations, because the structure of occupations whose earnings are rated by the respondents differs considerably from the actual structure of occupations in Poland. In other words, it is conjectured that if the sample of occupational titles used in the study were more representative of the actual occupational structure

of the Polish society, the discrepancy between mean-based and inequality-based injustice would be much smaller. To see this, note that the occupations that “elevate” the average perceived earnings to such a high level (minister and factory manager) constitute 40 percent of the sample of occupational titles, but they account for less than 5 percent in the actual occupational structure. If the former were more differentiated, the discrepancy between perceived and postulated earnings—and, consequently, the discrepancy between the two types of injustice depicted in Figure 4—might be smaller. In order to check this conjecture, one would require a study using a longer and more diversified list of occupational titles whose earnings are to be rated.

Conclusion

This article reported on an analysis of data concerning popular perceptions of earnings in a number of occupations. The data are taken from the POLPAN panel study, which covers the period 1988–2008. However, because the relevant items were not included in the most recent wave of the survey, the analysis is limited to the period 1988–2003. The analysis is exploratory rather than explanatory in that the focus has been to point out some patterns in the data and possible future elaborations rather than to propose a model explaining the patterns. The elaborations deal mostly with the design of the study. It is argued that if the propositions put forward in this analysis are followed, then more substantive hypotheses can be investigated and tested. Briefly summarizing the relevant propositions:

1. According to reward expectations theory, expectations as to the fair levels of reward are shaped by so-called referential structures, or generalized, and shared, beliefs linking the states of some salient characteristics, such as gender and education, with reward levels, such as income or prestige (Berger et al. 1985, 1998). Therefore, in order to be able to formulate any hypotheses regarding popular perceptions of “just” earnings, one needs to know which characteristics are salient for respondents when they estimate the earnings. One way to manipulate these characteristics explicitly is to use the factorial-survey design, as presented by Jasso (2006a).
2. In POLPAN, respondents estimated actual and just earnings in a number of occupations, but the lists of occupational titles were different in successive waves of the panel, and only five titles were used in all waves in which the relevant questions were asked. This seriously limits inferences that can be drawn from the analysis. Future studies should therefore make use of longer lists of occupational titles that are more “representative” of the occupational structure of the society under study.
3. Given that analyses of the perceptions of earnings and perceptions of prestige led to contradictory conclusions, it would be interesting to combine the measurement of the former with the measurement of the latter within one design and use the same methodology, so as to be able to answer how much of the contradiction is accounted for by differences in the method of measurement.

4. Because the quantitative description of the perceptions of inequality and injustice are only interesting to the extent they can be used to explain the dynamics of some social process, such as emotional and behavioral reactions to income inequality, relevant items should be added to the questionnaire as well. Research on distributive justice has shown that the assessments of justice are shaped by normative considerations (what individuals and groups think is just, and why) as well as perceptual biases, self-interest, and attributions of the experienced injustice to a particular source. That is, reactions to injustice differ depending on whether the source of the injustice is someone's deliberate action and an extra-individual mechanism.

I recommend that future studies in the area of distributive justice and perceptions of inequality follow the guidelines outlined in this article. Hopefully, such studies will provide sociologists with high-quality data with which to test complex theoretical hypotheses that would contribute to our understanding of the stability of inequality.

Notes

1. For a general overview of sociological theory and research on distributive justice, see Cook and Hegtvedt (1983), Hegtvedt (1994, 2006), Hegtvedt and Johnson (2000), and Hegtvedt and Markovsky (1995).

2. Readers interested in a more detailed account of the notion of referential structures are encouraged to consult Berger et al. (1985, 1998).

3. Note, however, that the work of Balkwell et al. (1980) is concerned with evaluations of occupational status rather than earnings.

4. The justice-evaluation function is one of the postulates of the theory of distributive justice developed by Jasso. Combined with other postulates of the theory, the function can be used to predict emotion and behavior. The literature on Jasso's theory of distributive justice comprises a rather large number of publications. For recent overviews of the implications derived from the justice-evaluation function, see Jasso (2006b) and Whitmeyer (2004).

5. In Jasso's (1999, 2006a) terminology, by removing the parameter θ from further discussion, we limit our attention here to what is termed "disclosed" or "expressed" justice evaluation, which is not necessarily the same as "true" justice evaluation.

6. Jasso (2006a) lists as many as nine different properties of her justice-evaluation function.

7. By missing data resulting from the study design, I mean that in the first two waves of the POLPAN study, the items concerning perceived and postulated earnings were not asked of all respondents, but of randomly selected sub-samples, because questionnaires in these two waves varied some of the modules; see survey documentation available through the Polish Social Data Archive at www.ads.org.pl.

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