Collective social chances and relative deprivation: How the accessibility of education can change the concept of self

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Abstract

This study will analyze the influence of rational micro behavior on unintended macro dynamics and explore how the latter in turn determines one's relative perception of self. By emphasizing the relativity of this perception, it becomes evident that the ascription of a self-concept is based on how that self-concept relates to others. Hence, this study will evaluate the concept of self in this sense, arguing that a relative social position can actually determine one's concept of self. More specifically, the question will be raised as to how one's position on the socioeconomic ladder can determine one's conception of self, not by determining how the absolute position on this ladder is conceived, but by whether the individual perceives himself as being deprived relative to others. This process of attaining a position on this ladder has been analyzed by Raymond Boudon (1981). An increase in social chances of individual actors serves as a predictor of a rather irrational outcome, namely, an increase of relative deprivation. After having explained the dynamics of the theories, as well as general effects on anomie and crime, there will be an exploration of the effects of more recent developments in several Western countries that are planning to raise tuition fees for higher education, an action that is expected to yield a lower deprivation rate. To determine whether the theoretical predictions made are valid, the article will conclude with a debate on some of the assumptions.

Introduction

To find out how a concept of self in a relative sense can be established, an analytical method will provide insights into unintended collective effects on the determination of a self-concept. In the construction of both a concept of self as well as an identity, psychological processes play an unmistakably large role. How one becomes just what he perceives himself to be, can be determined on the basis of personality traits, past experience and ones unconscious. However, apart from a rather complex collection of intrapersonal factors, one can also distinguish a dynamic process of the interpersonal—social—world. In doing this, one enters the world of Sociology, a field that is not limited o examining the influence of the social context on the perception of self. Instead, the social dynamics that inevitably influence the individual in unintended and unconscious ways constitute the area of study for sociologists (Ultee, Arts, Flap, 2003). Arguably, a large part of the concept of self is the social position, as studied by social scientists, and the word "position" itself suggests a certain relativity, because it necessarily involves both a disparity among social actors, as well as an ongoing process of comparison. This process highly influences the psychological self-concept, according to Keith and Schafer (1985). In their study, the sense of relative deprivation and multiple negative psychological traits were found to be correlating among young women (Keith & Schafer, 1985). Boudon (1981) has proposed a model that can predict a relative deprivation rate based upon the social chances of individual actors. Social chances, such as the accessibility of education, suffer from rapid changes by policy makers. How these changes can eventually affect the individual concept of self, will be the final question addressed in the present paper.

The macro-micro-macro link

Raymond Boudon proposed a detailed model of how this process evolves in 1981, using game theory to explain how rational, goal-directed behavior of individual actors could have a macro outcome that is irrational and that does not precisely reflect the individual's initial goals. This means that actors are highly interdependent, and that they anticipate the choices that other actors will make, assuming that they also show goal-directed behavior (Axelrod, 1984). In short, this creates a macro-micro-macro link that is established according to the following scheme (Coleman, 1987):

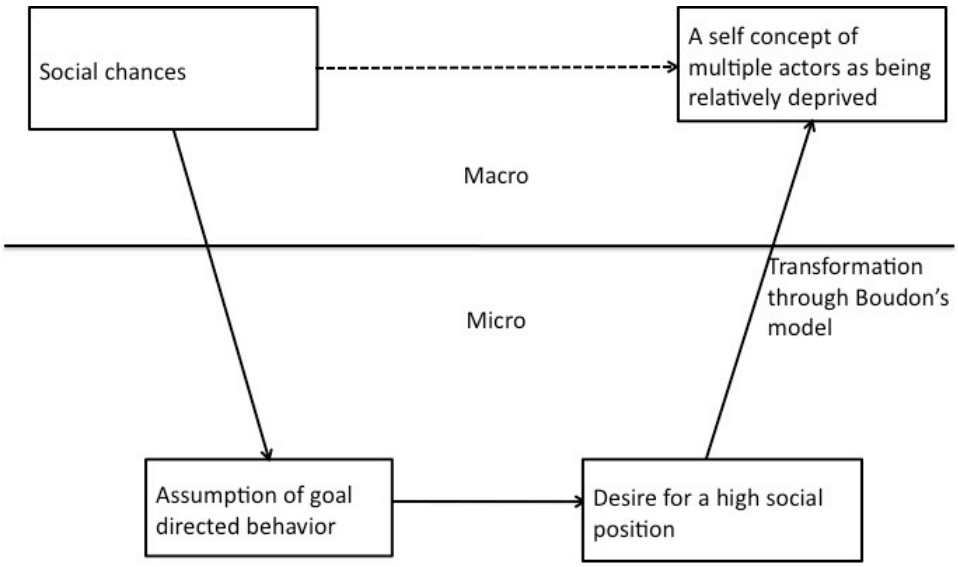

Figure 1. The Coleman (1987) scheme of relative deprivation according to Boudon (1981)

Boudon's lottery

Raymond Boudon (1981) designed a game theoretical model that resembles the market of social chances as a lottery. The main assumption made in this model revolves around the concept of the rational choice. Thus, in studying social chances, many sociologists tend to regard the individual as economically driven (Fehr & Gintis, 2007). According to this theory, every person is reduced to functioning as an actor who behaves according to his or her beliefs, preferences and constraints. However, from this assumption, the critique emerges that behavior is often irrational, or driven by the norms of intermediary groups (Fehr & Gintis, 2007; Durkheim 1966). Fay (1996) argues that any irrational behavior can be reduced to a rational essence, especially by psychologists (Fay, 1996) and one can thus argue that this assumption is valid when studying this sociological mechanism.

Assume that there is a lottery, and that 10 participants (N) all have a stake (S) of 2 dollars in it. There are only 4 winners (W), who each receive a prize of $10. However, each individual actor can choose to invest the required stake or not. This results in a rational choice of the players as to whether or not to participate in the lottery. The chance of a person to actually win the prize equals

$$q=w/N.$$

This probability is used in the equation that determined the anticipated profit for each player (Boudon, 1981).

$$\text{Expected profit} = q\,(P-S)-(1-q)\,S$$

This equation simply reflects the chance of winning, namely q times the profit after the costs of investments are subtracted, minus the chance of losing (1-q) times the investment. The outcomes always depend on the number of other participants on the lottery (N), because this determines the probability of winning (q). Using both formulas enables one to determine the following payoff matrix:

Profit expectation of a player	Number of other participants									
	0	1	2	3	4	5	6	7	8	9
Participation	3	3	3	3	2	1.6	1.31	1.1	0.93	0.8
Non-participation	0	0	0	0	0	0	0	0	0	0

As explained earlier, the assumption of goal-directed behavior is crucial, since the payoff matrix suggests that a player will always choose the highest outcome. In this matrix, that means the players will participate as long as participation yields a better payoff than non-participation. In other words, participation becomes a dominant strategy (Axelrod, 1984). However, as more players participate, the expected profit gets lower and will eventually intercept with zero. Boudon explains that, in reality, individuals often have the choice between investing (S) in education or settling for a lower income job (Boudon, 1981). The

choice they actually make depends on their perception of on the probability of the labor market being able to provide them a high monthly income (P). However, the labor market only has a limited number of positions that are actually that profitable (w) in terms of, for instance, the social status that can be attained. Subsequently, many more people tend to participate in the labor market by investing in education in the pursuit of a positive relative self-concept that such a high status provides. This ultimately reduces one's chances to obtain a desirable position. An empirical analysis on the effects of changing educational participation rates, using this model, has shown that it is rather accurate in explaining the dynamics of collective interdependency (Green & Goldthorpe, 1997).

Increase of social chances

In order to actually use this model to evaluate its use for influencing social chances of the choices individuals make to either participate or not, Boudon (1981) offers the following theory. If the social chances that are represented as the gross profit (P) in the lottery become progressively higher, the expected profit remains above zero longer, as will be shown below. Note that participation is a dominant strategy as long as it yields a higher pay off than non-participation. Now assume that P is higher, namely 8. Now that the social chances have improved, the point where participation will not be a dominant strategy (participation < non participation) is postponed to a situation with more players than when P was equal to 5:

Profit expectation of a player	Number of other participants									
	0	1	2	3	4	5	6	7	8	9
Participation	3	3	3	3	2	4.4	3.6	3.03	2.6	2.3
Non-participation	0	0	0	0	0	0	0	0	0	0

Deprivation rate

Boudon (1981) argues that when one does not win, he or she feels relatively deprived (Boudon, 1981). Since he witnesses others winning, but could not gain the desired profit from his invested stake, a frustrated concept of self emerges. As explained earlier, it is only because of this relationship, and the constant comparisons to others, that one develops such a frustrated self-concept, which possibly carries with it less self-esteem. Most importantly, it hides an unintended process the individual is unaware of. To measure the proportion of people that are deprived, the deprivation rate equals N-W/N. This represents the number of "losers" divided by the total number of participants. Note that this is a proportion of a population and not a measure of how deprived one is. The assumption for this model is that the deprivation variable is dichotomous. Boudon (1981) himself was very much interested in how this model could explain how many people did not manage to become more endogamous in their position on the social ladder, despite the increasing proportion of highly educated people. To belong to a higher social class is assumed to be a primary goal of individual actors. But this winning situation could only be achieved by a few, while the others that had invested in better education did not turn out to have attained better social positions. This is quite a natural social phenomenon, but the investment that has been made in relatively high social chances combined with the persistent comparison with others, devalues the lower positions that are attained (Boudon, 1981).

Relative deprivation and anomie

On the basis of the lottery model and its implications for social phenomena, a rather counterintuitive conclusion can be drawn, namely that increased social chances, mobility and even equality can lead to more relative deprivation. Many of these conclusions have been empirically tested (Boudon, 1981; Wegener, 1991). Wegener (1991) found that for people to evaluate whether they are justly or unjustly paid depends mostly on the comparison with others and the amount of mobility that preceded the present income (1991). Durkheim (1966) found even more striking evidence of the importance of relativity in the experience of social deprivation in the phenomenon of anomie. Anomie within groups turned out to be a result of relative deprivation that leads to a situation in which individuals break the structural constraints of their respective groups. More specifically, Durkheim used this theory to explain suicide rates in societies (Durkheim,

1966). Merton (1938) used Durkheim's (1966) theory of anomie to explain relative crime rates in countries, as well as social welfare abuse (Merton in: Ultee Arts & Flap, 2003). These are all negative outcomes of an individual's self-concept—a self-concept that is negative due to one's comparison with the surrounding social environment. More recently, a multilevel analysis of anomie was also consistent with Merton's theory, and concluded that structural social factors strongly influence anomie (Zhao et al., 2010).

Inequality as an initial condition

These insights into both the dynamics that precede relative deprivation (as explained by Boudon) as well as the resulting collective effects (as researched by Durkheim and Merton) suggest that the lottery plays a crucial role in some of western societies' largest challenges. The most interesting part of Boudon's model is that the parameters that decide the deprivation rates are variable. This means that one could come up with a different theory. First, a situation will be presented in which more inequality among actors causes a lower deprivation rate (Boudon, 1981). Then, more substantively, a new model will be presented in which increased costs of higher education causes the stakes (S) to be higher. When the number of winners (w) is smaller, the gross profit (P) is distributed among fewer actors. This can be seen as a form of inequality, as this is a reality in all societies, but in varying degrees. So assume N is still 10, S is 5 and w is 2 (instead of 4) and P is still 5. This means the following payoff matrix will occur:

Profit expectation of a player	Number of other participants									
	0	1	2	3	4	5	6	7	8	9
Participation	3	3	1.6	1.1	0.8	0.6	0.46	0.35	0.27	0.2
Non-participation	0	0	0	0	0	0	0	0	0	0

Here it becomes evident that the expected profit will reach the level of non-participation zero earlier than before, which will cause fewer people to participate. So more inequality leads to a lower rate of relative deprivation (Boudon, 1981). How valid this outcome is empirically, has not yet been determined in sociological research but a great deal of empirical data (e.g., as presented by Boudon, Durkheim and Merton do suggest that the lottery model is accurate. Substantive cases of horizontal inequalities are also found in developing countries (Stewart & Brown, 2007). In many of these countries, the high sense of inequality as experienced by the deprived groups leads to violent conflict (Stewart & Brown, 2007). In order to avoid such extreme contrasts within these countries, international bodies as well as non-governmental organizations invest in making education more accessible to greater numbers of people in order to ultimately reduce the horizontal inequality.

Undesirable outcomes

Boudon (1981) states that the number of desirable social positions is always limited and does not grow simultaneously with the increase of the average educational level. In the debate about inequality and social deprivation, Boudon chooses education as the most important investment in terms of the lottery, and does so for a particular reason. Traditionally, education is the key to social mobility and exogamy that has been increasingly available for the lower social classes over the last centuries. Primary and secondary education has become compulsory in almost all western societies, and the accessibility to education is a primary developmental aim in third-world countries. No matter how theoretical Bourdon's model is, it does at least suggest that investment in education will not decrease the relative deprivation. Obviously, tension exists between what is ethically and traditionally acceptable in regards to social policies, on the one hand, and some of Boudon's hypotheses, on the other. For instance, the question arises as to how this issue relates to development policies in the third world. Empirical testing of the effects of policy would be the next step. In order to do this, a more specific theory and its potential effects on the self-concept will now be derived from Boudon's (1981) general theory.

Tuition fees

If a government seeks to raise the tuition fees for tertiary education, one could argue that the stake that is invested by the individual increases. The decision to participate in the

lottery is often determined by one's willingness to invest in education in order to attain a high social position. In the wake of the recent economic crisis, both the Netherlands and the United Kingdom face such policy proposals at the end of 2010 (BBC News, November 3, 2010). Also, the decision to enter tertiary education is an eminent threshold in the attainment of a higher social status according to Green and Goldthorpe (1997), who have approached this investment as the stake (S) as Boudon (1981) did. To reflect such a scenario, assume that the stakes have been raised to 4. According to Boudon's (1981) model, such a scenario radically changes the payoff matrix:

Profit expectation of a player	Number of other participants									
	0	1	2	3	4	5	6	7	8	9
Participation	3	3	3	3	0	-0.55	-1.13	-1.5	-1.78	-2
Non-participation	0	0	0	0	0	0	0	0	0	0

Now, for the first time, the social pre-condition has changed the expected profit into the negative. Now note that, according to game theory, investing in education (or participation) is only a dominant strategy if 3 or, at most, 4 other participants take part in the lottery. So fewer people will take part in the lottery and actually invest in tertiary education, because they do not perceive their chances to be as good as before, since the gross profit, in income and status, is reasonable, but the required investment has become higher. These micro decisions lead to a macro outcome of fewer actors with a lower deprivation rate. This exact deprivation rate becomes 4-3/10 = .10. This means that far fewer people find themselves deprived, since they are not disappointed in their investment.

Assumptions and critiques

One should not be overly hasty in drawing this conclusion, since a large scale of empirical measurement is required to actually test this hypothesis. Nonetheless the strong theoretical argument cannot be taken lightly. There are some important assumptions made in this model, and a close examination of these assumptions can help determine the validity of the theory. Most importantly, the actors have only two behavioral alternatives; they can choose to invest in tertiary education or choose not to. Many other alternatives are at hand, such as starting a business. However, it is possible that, with raised tuition fees, the decision is likely to focus on whether to enter university or not. In the scenario in which the individual actors know the expected profit, they are, according to the model, forced to choose simultaneously. This is a situation that is not likely to occur in reality, although when larger numbers of actors are involved, the choices are made anonymously, which is closely related to simultaneously. Next, in Boudon's model no binding agreements exist between actors, while in reality agreements like these are constantly made between people voluntarily and as a result of legal obligation. But making binding agreements as to who is free to pursue higher education and who is not would not be ethically admissible, and would not cause a decrease of relative deprivation. Anyone who is denied the right to invest in higher education will still have a lower (or deprived) self-concept in relation to others.

Conclusion

Hence, a conclusion can be drawn that, despite the simplifying assumptions made in both Boudon's (1981) theory as well as in general game theory (Axelrod, 1984) there is a rather strong deductive nomological relationship between the initial conditions and the outcome. Individuals are likely to be rationally and economically driven and to seek attainment of a high social status, if they perceive their chances of success to be high enough. However, due to the interdependence among the actors, it becomes evident that the more actors attempt to get such positions, the more actors will find themselves deprived relative to the limited number of winners. Hence, the ones that do not manage to succeed "lose" and adjust their self-concept accordingly, due to a macro social market that they cannot influence. Subsequently, the both scientifically and practically relevant situation of decreased social chances tends to yield a lower deprivation rate. This is exactly what happens in a situation in which the accessibility to

higher education decreases, a situation which casts an ominous shadow in many societies and is perceived as highly undesirable in regards to a policy of equity and social mobility. However, the latter might only constitute a "common sense" perception, and policymakers should be made aware of possible unintended consequences when intervening in social conditions like these.

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