

Barking Up the Wrong Tree?

A short look on Poor Outcomes of Anti-Violence Programs in Soccer using an Experimental Economics Approach

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Abstract

This study examines how team identification affects intergroup behavior between different fan groups by means of a unique field experiment with fans of a German Bundesliga team prior to one of its matches. The experiment combines an adaptation of the dictator game with the classical 'minimal-group paradigm'. Contrary to the predictions of social identity theory, subjects do not engage in intergroup discrimination. Instead, participants in the experiment show a pronounced tendency towards a fair split which is interpreted as evidence for a common and shared norm of fairness and solidarity among soccer fans. With respect to fairness, participants appear to perceive themselves as soccer fans in general rather than fans of "their" club. The self-categorization between the superior identity as soccer fan or as a club fan is dependent on previously unknown situation factors.

Keywords:

Social identity, team fans, dictator game, experimental economics, fan identification

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Introduction

Violence in sports is a well-known phenomenon, both globally (Jewell, Moti & Coates, 2012) and regionally (see Spaaij, 2014, p. 147; Patsantaras, 2014; Domizio & Caruso, 2015 for current trends in European countries). Although a high amount of resources have been invested in resolving this issue in the past twenty years, the level of violence in sports still has not decreased (see Amthoj, Emrich & Pierdzioch, 2013 for Germany).

There are several approaches to explain violence among sports spectators from different fields: educational science, psychology, sociology and economics, for example. This led to the development of highly complex theories with an increasing number of explaining variables, albeit with decreasing predictive power. It thus becomes increasingly hard to derive actions to prevent violence from these theories. One of the most popular theories used is the Social Identity Theory (SIT) (Tajfel & Turner, 1979, 1986). The basic line of thought is that violence among sports fans can be explained as aggressive ingroup-outgroup behaviour. Fans of one team perceive themselves as the ingroup while fans of the opposing team are perceived as the outgroup. Despite the widespread acceptance of the assumptions of ingroup-outgroup behaviour, there is little empirical evidence supporting these claims. Our paper focuses on finding empirical evidence for this ingroup–outgroup self-perception. Lack of empirical evidence (which is our finding) would suggest that this might be a plausible explanation for the failure of preventive strategies based on SIT. Assuming that a dichotomy exists between the fans of opposing teams might simply be a case of “barking up the wrong tree”.

To find evidence for ingroup-outgroup behaviour we employed the dictator’s game. This is a well-known tool used in experimental economics that has yet to be applied to sports fan research. The paper is structured as follows. The next section reviews the literature on social psychology, sports fans, and fan conflict, and provides the theoretical framework of our study. Next, the experimental design is described which is followed by a presentation and then discussion of the results. The final section concludes and lays out avenues for future research.

Literature review and predictions

Social Identity Theory (SIT) (Tajfel & Turner, 1979, 1986) and Self-Categorization Theory (SCT) (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987) conclude that (I) in-group-members favor other in-group-members und discriminate against out-group-members and (II) create a superior identity to distinguish between members of their own group and members of conflicting groups. Ingroup-outgroup discrimination has been widely observed in so-called “minimal-group” experiments. Compared to the empirical research on groups, SIT views groups not as an external influence factor of individual behaviour, but rather, the group is an extension of the individual self-concept with

depersonalization as the central process (Zuccheromaglio, 2005, p. 219; Fink, Parker, Brett, & Higgins, 2009, p. 142).

Two kinds of people are more likely to develop a “superior identity” – (I) people who interact with many people of different identities (Allport, 1954) and (II) people who are members of many different social groups who adapt their identity respectively (Gaertner & Dovidio, 2000; Hewstone, Islam, & Judd, 1993; LeVine & Campbell, 1972; Mähönen, Ihalainen, & Jasinskaja-Lahti, 2013; Turner, Hewstone, & Voci, 2007. For an application on sports see KangJae & Scott, 2013).

Sports research based on SIT or SCT mostly use the Sports Fandom Questionnaires (Wann & Branscombe, 1995) and the Sport Spectator Identification Scale (Wann & Branscombe, 1993). Both scales focus on the linkages among identification with sports teams, the different behaviours of fans, and their self-concept. Fans benefit from fandom and associate his or her self-concept with such teams or groups (e.g. Cialdini, Borden, Thorne, Walker, Freeman, & Sloan, 1976; in case of failure Dalakas, Madrigal, & Anderson, 2004 and Zuccheromaglio, 2005; in case of breach of the rules by the players Fink, Parker, Brett, & Higgins, 2009).

Fans who are more involved tend to enjoy higher levels of social appreciation, self-esteem, social well-being, vigour, positive emotions, openness, conscientiousness and extraversion. Loneliness, depression, alienation, experiences of negative emotions, fatigue, anger, tension, and confusion tend to be lower for fans with high levels of identification (see Wann, 2006a, p. 273 together with literature survey there). However, a high level of team identification is also related with a higher level of aggression, violence, and cheating in favour of the supported team (for an overview Wann, 2006b).

Most studies on intergroup fan behaviour based on SIT and SCT focus on fan violence and find correlations between identification and aggression level (e.g., Wann, Haynes, McLean, & Pullen 2003). Wann (1993) finds evidence that a high level of identification with a team does not only lead to aggression towards players and coaches of the opposing team, but against fans of the opposing team as well. They conclude that the “spectator’s level of team identification is a key personality variable in predicting the likelihood that he or she will act in an aggressive manner” (Wann, Haynes, McLean, & Pullen, 2003).

Jenson (1992) observed that violent fans are likely to have low self-esteem and lack strong social connections. These fans then try to establish identity, connection and meaning via celebrities and team loyalties, Fandom becomes a risky, even dangerous, compensatory mechanism. Thus, hostile and aggressive behaviour serves as a way for individuals to feel better and to enhance their self-esteem (Dimmock & Grove, 2005). Other research on in-group-solidarity is compatible with the predictions of SIT (Dimmock & Grove, 2005), from findings that in-group-identification among fans is associated with less self-esteem (Jenson, 1992), to the model of fan behaviour from Simons and Taylor (1992). With respect to SIT and SCT, Wann (2006a, p. 281 and 285) find different coping strategies by fans to maintain the difference between their own in-group and relevant out-groups, in case of defeats, for example.

Richardson and Turley (2006) used an experimental setting and found that team affiliation might not be a question of identifying with the team, but rather, as a way to distinguish oneself from other fan groups. Outgroup-discrimination might thus be the major issue for members of fan groups. Fans of a team not only follow group norms that are supposed to be supportive of their own team, but also follow implicit rules that discriminate against the out-group, in a bid to satisfy this “desire for positive distinctiveness from other groups” (Madrighal, 2001, p. 148).

Research employing SIT on sports fans focus on the individual fan being a fan of a certain team. Schlesinger and Gungerich (2011) give a comprehensive overview on sports sponsorship. Yoshida, Gordon, Nakazawa, and Biscaia (2014) researched on fandom on being a specific form of customer engagement. These studies viewed fans as consumers of team-specific goods and tried to use SIT to improve business. However, these studies do not take into account the fact that fans might be fans of the form of sports first, and be a fan of a certain team second.

The present empirical evidence suggests that fans from a certain team constitute an in-group, favor the in-group members, and often even discriminate out-groups. In decision situations, the in-group members should benefit other in-group members more than relevant out-group members or those who cannot be assigned to neither the in-group nor the out-group (neutral persons).

Based on our literature review we predict that:

H1: Fans of the same team are perceived as in-group members and are therefore treated more favorably compared to fans of other teams who are perceived as out-group members.

H2: Fans of the same team are perceived as in-group members and are therefore treated more favorably compared to neutral persons who are also perceived as out-group members.

H1 and H2 deal with individuals in different in-groups to bring into light the intergroup discrimination.

There is empirical evidence for fan behaviour without intergroup discrimination, though. Scheepers, Spears, Doosje, and Manstead (2003, p. 572ff.) did not observe discrimination in soccer fan songs from Ajax Amsterdam. Platonow et al. (1999) reported no difference in charity fan donations for the collector wearing in-group or out-group member clothing respectively. Chien and Kelly (2016) found support for a superordinate in-group behaviour in the case of a sport scandal.

Additionally, Brewer and Pierce (2005, p. 428) stressed that individuals are members of different in-groups at the same time and propose that social identity is composed of multiple reference groups. In line with the common intergroup identity model, they found a higher level of tolerance for out-groups by individuals with multiple reference groups. Furthermore, personal ties to in-group or out-group persons gave an orientation for their own behaviour (Platonow et al., 1999), even though self-assignment to a group is necessary (Levine, Cassidy, & Brazier, 2002). A different framing can influence the self-assignment towards the more socialized group.

However, Levine, Prosser, Evans, and Reicher (2005) have described the possibility to help fans from another team while the instructions highlight the positive behaviour of soccer fans. Unfortunately Levine et al. did not control other opportunities for cross categorizations like age, gender or ethnicity. To rule out cross categorization as a plausible explanation for non-discriminating behaviour, a different experimental setting is needed: A group that has already self-categorized as in-group with an identifiable out-group, and a third group that should not be affected by this in-group/out-group categorization.

Without a stimulus for a cross categorization in a decision situation we expect:

H3: Fans from one team discriminate fans from another team more than neutral persons.

All studies cited look at variations in the level of identification. If rivalry and discrimination between groups is indeed deeply rooted within human behaviour as proposed by the social identity approach, identity-contingent discrimination and out-group rejection should be omnipresent whenever persons with contrasting fan-identities encounter each other. Our study therefore pursues a different approach than previous studies on social identity in the sports context. Instead of trying to accurately measure a certain parameter of fan behaviour or to analyse how variation in identification affects cognitive, affective, and behavioural responses, we aim to identify universal effects of identity, to scrutinize foundations of human behaviour, and to empirically test SIT, SCT and the category “soccer fan” as an important category in the perspective of the cross categorization approach.

On the one hand we need an authentic identification process. On the other hand, especially for H3, we would like to control the possibility of cross categories of self-identification. To test our assumptions we ran a behavioural experiment to investigate if and how pure categorization due to affiliation with sports teams affects intergroup behaviours of fans.

Experimental design

While the basic idea of our study was inspired by the original experiments by Tajfel, Billig, Bundy, and Flament (1971), our design differs in two important aspects. First, we employed the dictator game (for a literature review see Engel, 2011) rather than the allocation game as proposed by Forsythe, Horowitz, Savin, and Sefton (1994). The dictator game mandates the subject to allocate the endowment between herself and another anonymous person. Regarding our research question, the dictator game measures identity-contingent other-regarding preferences without asking for a direct comparison between different groups, which is inherent in the allocation decision employed by Tajfel, Billig, Bundy, and Flament (1971). For our experiment we adapted the maximum-distance design by Johannesson and Persson (2000). In addition to the double-blind procedure used by Hoffman, McCabe, Shachat, and Smith (1994) this design maximized social distance between dictator and receiver by mailing donations to anonymous recipients who were unaware of the experiment and who were randomly drawn from the population.

The second deviation from the original experiments on social identity takes into account the kind of identity that was used. As the basic idea of our experiment was to address subjects that already defined themselves as being fans, we did not randomly assign a fictional identity and used an existing identity instead. In this way, we can explore effects of cross categorization when we use groups of self-categorized opposing fans and a group of neutral persons.

The experiment took place in the Leverkusen soccer arena three hours prior to the match between Bundesliga clubs Bayer 04 Leverkusen vs. Hannover 96 at the penultimate game of the 2011/2012 season¹. The game was not emotionally charged by a higher level of local fan rivalries nor was there a history of violent fan collisions. It was the last game of the season. The result of the match would not affect any of the teams' goals for the season or international leagues.

The participants were members of the official fan clubs from Bayer 04 and were welcomed by the experimenter and the official fan representative of the soccer club. As expected, all participants that attended were dressed with fan paraphernalia like shirts, scarves, and badges as symbols for their in-group self-categorization.

They were handed a questionnaire asking for their age, occupation, and gender, and were paid a show-up fee of 5 €. Participants were divided randomly into three groups to test our predictions. The instructor read the instructions out loud to all members of a group and answered questions. Participants were always referred to as "fans of Bayer 04 Leverkusen", so as to make their fan identity salient.

Participants received an envelope containing ten 1 € coins. In a voting booth, subjects then removed and pocketed as many coins as they chose from their envelope. They then sealed the envelope with the remaining coins, dropped it in a voting urn, which was also shielded by a visual cover, and left. Subjects were told that the remaining amount would be distributed randomly to a person not affiliated with the experiment. Each of the three experimental groups had a different recipient: For the "Bayer-group", we would forward the money to another fan of Bayer 04 Leverkusen. For the "Hannover-group", we would forward the money to a visiting fan from the opposing team. For the "telephone-group" in the "non-categorization treatment", we would forward the money to a random person chosen from the German population using the telephone book.

86 subjects participated in the experiment. 62 % (n = 53) of them were male. The age of participants ranged from 14 years to 62 years (women were between 15 and 56 years old; men's age varied between 14 and 62 years) with the average age being 30.0 years (women 29.1 years; men 30.6 years) and a standard deviation of 11.7 years (women 10.8 years; men 12.2 years). The three treatments did not significantly differ in the group composition in terms of gender and age.

In summary, to inspect our predictions we ran an extra-laboratory experiment (Charness, Gneezy, & Kuhn, 2013) to combine the methods from experimental economics (for an overview Santos, 2011)

¹ The Bundesliga is the premier soccer league in Germany.

and social identity approach which deviates from the standard methodology employed in sport fan research like Wann (e.g. 2006a, 2006b).

Results

On average, subjects in the “Bayer-group” donated 3.83 € ($\sigma=3.07$ €) from their endowment to other fans of their own team. The “Hannover-group” donated 3.10 € ($\sigma=3.29$ €) to the fans of the guest team, and the “telephone-group” 4.32 € ($\sigma=3.49$ €) to randomly assigned recipients. Figure 1 depicts the observed distribution of dictator giving in the three treatments.

Please insert Figure 1 around here.

Subjects in the treatment "Bayer 04" (light grey bars) on average gave 38.28 % (std. dev. of 30.7 %), subjects in the treatment "Hannover 96" (grey bars) on average donated 31 % (std. dev.: 32.9 %), and subjects in the “non-categorization treatment” (black bars) on average left 43.2 % (std. dev.: 34.9 %) of their endowment in the envelope. The mode for all treatments was located at ("Hannover 96" and "non-categorization treatment") or close to ("Bayer 04") the 'fair' offer of 5 €. The respective effect sizes measured by Cohen's d are $d=0.23$ for the difference between the treatments "Bayer 04" and "Hannover 96", $d=0.15$ for the difference between the treatments "Bayer 04" and "non-categorization treatment", and $d=0.37$ for the difference between the treatments "Hannover 96" and "non categorization treatment".

Applying several statistical tests for average giving as well as the distribution of donations (see Table 1) reveals that the only statistically significant difference at the conventional 5 %-significance level is between the “non-categorization treatment” and “Hannover 96” and only for the t-test of average distributions ($p=.047$). The Mann-Whitney test signals weakly significant differences for the distributions of the “non-categorization treatment” and “Hannover 96” ($p=.063$) as well as for the comparison between treatments “non-categorization treatment” and “soccer fans” (treatments “Bayer 04” and “Hannover 96” combined) ($p=.071$). Hence, we conclude that contrary to the predictions made by the social identity approach, there is no real significant difference between the various treatments.

Please insert Table 1 around here.

Thus, neither Hypotheses 1 nor 2 are supported by the data. In respect of Hypothesis 3 there is empirical evidence for the prediction. Fans from Bayer 04 with no possibility for cross categorization gave more money to other persons compared to persons in a situation with a possibility for a cross categorization as a soccer fan.

In addition to these results, we found an overall extraordinarily high level of donations (see Figure 2). Average donation in our experiment amounts to 37.44 % of the endowment. Also, the number of participants ($n=8$) who kept all the money for themselves made up less than ten percent which is almost equal to the number of participants extending hyper-fair offers ($n=7$). In comparison to the original study by Johannesson and Persson (2000) (grey bars in Figure 2) which did not use sports fans as its subjects, more than two-thirds of the 54 subjects (68.52 %) acted fully selfishly. Only two participants made hyper-fair offers, but none of them offered more than 60 % of the pie. However, the modal offer ($n = 24$) of our study is the equal split between dictator and receiver. The difference in the observed donation levels between studies is highly statistically significant ($p < 0.01$ for both t-test of equal average donations and Kolmogorov-Smirnov test of equal distributions of donations).

Please insert Figure 2 around here.

Engel (2011) provided a meta-study of 129 published studies on the dictator game between 1992 and 2010 which tested 616 different treatments. Over all these studies, dictators on average gave 28.35 % of the endowment. Roughly 25 % of these studies reported higher levels of dictator giving, but these experiments either did not employ such a high level of anonymity as we did in our study, or limited the choice set of their participants. The high overall donations in our experiment is also a noticeable result as the unexpected finding of no intergroup discrimination. These findings require further discussion.

Discussion

Lack of intergroup discrimination

Contrary to Hypotheses 1 and 2 we did not find a general intergroup discrimination. Fans of the same team did not receive higher donations compared to the opposing teams' fans and a random group. This result can be explained in three different ways.

First, Yamagishi and Kiyonari (2000, p. 127f.) argued that identity only induces intergroup discrimination when expectations of in-group reciprocity are operating. Since our dictator game design removes any chance of reciprocity, one could interpret the result as evidence for their theory of identity as a "container of generalized reciprocity" (Yamagishi & Kiyonari, 2000, p. 116) which contrasts Tajfel and Turner's (1986) SIT.

Another explanation that could potentially account for the result is the "comparative ignorance"-hypothesis proposed by Fox and Tversky (1995). It states that ambiguity aversion will be present when subjects evaluate clear and vague prospects jointly, but will diminish or even disappear when they evaluate each prospect in isolation. Somewhat similar to Yamagishi's and Kiyonari's theory, identity would assume the role of a gold standard which enables the individual to structure his environment along known categories. Evidence on this theory is limited though, as most experiments on minimal groups employ within-subject designs (e.g. Chen & Li, 2009). Third, the results are consistent with the

social identity approach if the third non-fan group does not constitute a relevant out-group. In this case, the fans of the Bayer 04 team (in-group) are only compared to the fans of the opposing team. If the donations to the non-fan group in future experiments confirm our findings and replicate higher donations to the non-fan group (neutral group) compared to the in-group, this result could be explained with respect to the function of the out-group. The non-fan group might be perceived as an irrelevant out-group for discrimination, but is a relevant out-group for the reputation of the in-group. In this instance, donations are an investment with the aim of increasing one's in-group reputation.

Different identities or a superior identity

In our experimental design we addressed participants already being soccer fans in their self-perception as soccer fans. In any given situation a person makes a self-categorization to one of the groups from his or her set of possible identities. We know close to nothing about the important key factors in such situations. If certain identities hold particular prescriptions in the fan context and trigger violent and antisocial behaviour, one can try to activate other identities within the same person as a means to deter such demeanour.

With the background of the models of cross categorization and common in-group identity model, it is difficult to explain the higher level of giving in the “non-categorization treatment” compared to the in-group. In fact, the result we measured is statistically insignificant but the higher level for the anonymous group was unexpected. We assumed a house money effect (e.g. Davis, Joyce, & Roelofs, 2010) as a consequence of our experimental design. The money given to the participants from the experimenters is similar to a windfall gain (e.g. Arkes et al., 1994). If so, the participants gave more money to the anonymous group compared to when giving part of their own money, but this is not on the same level as a relevant outgroup level of dictator giving.

The high overall level of average donations across all three treatments alludes to a hidden or maybe (by the media and general public) largely ignored aspect of soccer fans: that they might have a distinct group norm for "fair" behaviour and solidarity. A similar observation can be made in an experimental study by Weisel and Böhm (2013), which utilized soccer fans to scrutinize the importance of out-group hate as a motivation for intergroup conflict. Due to this different research question, they used an entirely different game – the intergroup prisoner's dilemma-maximizing difference (IPD-MD) game by Halevy, Bornstein, and Sagiv (2008). This game is strategic and is not simply a measure of preferences as in our case. Despite these differences in design, their subjects across all treatments - fans of six different German soccer teams - also predominantly chose to cooperate rather than to defect in the prisoner's dilemma which would be the game's dominant strategy².

Although the experiment tested a different aspect of intergroup behaviour in a different setup, these results support our proposition that soccer fans share a group norm of cooperation and fairness. Deviations from the payoff-maximizing strategy in the dictator game are frequently explained with

² The share of cooperators varies between 78 % and 100 % across treatments.

models of altruistic preferences (e.g. Bolton & Ockenfels, 2000), i.e. reciprocity, inequity aversion, and fairness. Reciprocity however, was ruled out by our design. Inequity aversion could account for dictator giving in our design, in particular given the 5 € show-up fee which was paid in addition to the 10 € endowment. It, however, cannot explain the significant difference between our study and Johannesson and Persson (2000) or other pure dictator games (see Engel, 2011 and Camerer, 2003, p. 57f.) who paid their student subjects the same show-up fee relative to the experimental endowment.

Conclusion, Limitation and Future Research

Violence amongst sports fans has frequently been analysed with tools from various faculties like psychology, sociology and economics. Countries like Germany spend an increasing amount of resources to solve this problem. Unfortunately the tools currently employed give little advice on this matter and thus there is little revenue from the resources spent. Our approach is grounded in the Social Identity Theory as our theoretical framework and the dictator game as a well-established tool from experimental economics. Our goal was to find out if a self-categorization as a football fan of a certain team leads to out-group discrimination. If there is no such behaviour this could be explained by the fact that the relevant in-group members do not constitute the fan group of a certain team, but rather of the whole type of sport (football).

Our experimental finding is that temperate soccer fans neither discriminate against fans of other clubs nor against recipients completely unrelated to soccer. Without regard to the fan identity of the recipient (fan of own team, fan of opposite team, no fan at all) the modal amount forwarded to the recipient was either at or close to the equal split of 5 €. There are also references to the effect of a “superior identity” as a football fan. This is evidence for a common and shared norm of fairness and solidarity among temperate soccer fans.

Sample size limits the power of our statistical analysis but this is a common problem with experimental economics. A more serious limitation is the problem of replicating the experiment with more fans or other teams. Every soccer match has its own set of confounding variables (traditional rivalries between certain clubs, relevance of the result for the national league or participation in international contests). To focus on the level of out-group discrimination, our experimental design would need to be applied to more matches.

As participants were temperate fans, further research should be directed towards the question on whether results are different with more extreme fan types like ultras and hooligans. A possible finding might be that extreme soccer fans are not just temperate soccer fans with a higher level of engagement but a totally different group with different in-group/out-group discriminating behaviour. This could shed a different light on anti-social behaviour in soccer games and the largely unsuccessful attempts to fight violence amongst soccer fans.

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