Situational Determinants of Envy and Schadenfreude

In this article the results of research on situational determinants of envy and schadenfreude are presented. Based on a literature review conducted, five hypotheses were devised concerning various situational factors influencing the intensity of envy and schadenfreude. The questionnaire used in the research was devised on the basis of interactional psychology and measured envy and schadenfreude. Situational dimensions concerned in the research were type of relation (close vs. distant/strange person) and the level of justice vs. injustice of the situation. 248 people participated in the research. Devised hypotheses were confirmed. Empirical results point out that along with expectations, the strongest envy is experienced in situations with subjectively perceived elements of injustice and towards distant acquaintances and strangers. The strongest schadenfreude was experienced by participants finding the situation of a stranger justifiable. It also occurred that women react with stronger envy in situations of the unjust success of a stranger whereas men, regardless of the situation, experience stronger schadenfreude in situations of the failure of a close as well as an unknown person.

Keywords: envy, schadenfreude, injustice, situational determinants

Introduction

Envy is a concept, which – although known to each of us – when looked at more closely, appears to be unclear and diverse in meaning. However, in order to define it, one has to differentiate envy and jealousy. The problem of distinguishing envy from jealousy was approached by many authors (Parrott and Smith, 1993; Salovey and Rodin, 1986, Silver and Sabini, 1978, Smith et al., 1988). Although envy is often mistaken with jealousy, research shows that these two emotions are qualitatively different.

A very clear differentiation between envy and jealousy was introduced by Salovey and Rodin (in: Blackwell Encyclopedia of Social Psychology, 1989). They conclude that although envy and jealousy are similar emotional states, it would be a mistake to identify one with another. They illustrate the major difference between them by using the triad P-O-X, where P represents a person that experiences emotion (envy or jealousy), O is a second person, and X is an object, a person or an attribute that is desired. The triad of jealousy illustrates a situation, in which P is in a relationship with X and afraid that O will disturb this situation by pushing away P and getting into a relationship with X. In this case, O is a rival that threatens the durability of two people’s relationship, it can be a third person, but it can also be an involvement in professional work or other activity as well. In the case of the envy triad, O owns an object or is in relation with it and P tries to take it away and get it for themselves.

In a distinction made by the authors it can be seen that social situations which lead to the described emotions are qualitatively different. Jealousy is expected when somebody or something wants to take away (or so we think) something, that is already ours whereas envy appears when something desirable is in the hands of others, instead of ours.

Envy, as argued before, is caused by unfulfilled desire for a feature or thing, owned by another person. This frustration can cause hostility and aggression. Research shows, that undeserved frustration is more likely to cause aggression than deserved frustration (Kulik and Brown, 1979; Pastore, 1952; Rule, Dyck and Nesdale, 1978, in: Smith and Kim, 2007). Smith (1991) thus suggests that using the notion of “feeling of injustice” can help explain the occurrence of hostility. According to this author envy without feeling of injustice does not cause hostility. In this case we rather deal with the type of envy distinguished by
Rawls (1971, 1993) that is called mild envy. Thus, only the feeling of injustice (at any level of subjectivity) naturally causes hostility (Master and Smith, 1987, in: Smith, 1991) and also causes envy, in the most common and frequent understanding of this word. Moreover, according to Smith and Kim (2007) the feeling of injustice seems to be very important in understanding envy and is a component of its definition. Parrot (1991) thinks that the emotion described by the statement “I would like to have what is owned by you” and not “I would like you to lose what you have” - experienced without hostility - is not envy.

Alas, literature concerning this area contains hardly any empirical data describing people towards whom we feel envy. And so Smith (1991) as well as Salovey and Rodin (1986) showed that we are particularly envious of people that we do not like. Who do we envy more – those who are close to us or strangers? The question is open, and account research that shows that first of all we envy those who we do not like, it seems justified to assume that we will envy strangers more than those who we like more – our closer acquaintances. Other research shows that we are also envious of people similar to us, that have advantage over us in an important - in our view - domain of life (Parrott, 1991; Salovey, Rodin, 1984, Salovey, Rothman, 1991; Habimana & Masse, 2000; Schaubroeck, Lam, 2004). On the basis of the conducted review, the following definition of envy emerges - it is an unpleasant and painful feeling that is characterized by a feeling of inferiority and hostility evoked by comparison to another person from a social group who possesses attributes desired by us.

The feeling of envy is inseparably connected with the notion of schadenfreude - which means malicious joy. Schadenfreude appears when, as a result of certain circumstances, the unfavorable advantage that caused us to be envious disappears. This idea can be found in the work of many researchers (Ben-Ze’ve, 1992a, 2000; Brigham, Kelso, Jackson, Smith, 1997; Buss, 2000; Feather, 1989, 1993; Ortony, Clore, Collins, 1988). Being happy about somebody’s misfortune is a phenomenon that, similarly to envy, is largely dependent on the situation. In some circumstances we see another person’s success as our personal failure and his or her failure as our victory. Many research studies show that being happy about somebody’s misfortune is more likely to occur in situations when that misfortune is perceived as deserved (Ben-Ze’ve, 1992; Feather, Sherman, 2002; Ortony et al. 1988; Smith, 1991; Smith et al., 1994). Brigham, Kelso, Jackson and Smith (1997) think, however, that there are arguments justifying the opposite idea – schadenfreude will appear regardless of the misfortune being deserved or not. Literature on the subject points out also other conditions of schadenfreude. Smith et al. (1996) on the base of their research conclude, that the less we like someone the more we are satisfied when they experience misfortune. On the other hand, research conducted by Olejarska (1997, in: Zaleski, 1998) reveals that the level of intimacy with the person that we are envious of, does not impact the intensity of experienced joy that will appear when that person experiences failure. Research done by Wojciszke (1997, in: Zaleski, 1998) shows additionally that malicious joy appears both when the failure is conditioned by lack of skills and by breaking norms. People do not differentiate between competences and intentions of the person that failed or do not take this difference under consideration.

In our own research we decided to examine the influence of the injustice of the situation and the type of relationship between the person that experiences the emotion and the object of that emotion on experiencing envy and schadenfreude. An additional goal was to answer the question whether gender differentiates in any way experiencing envy and schadenfreude. An analysis of literature on the subject does not give any certain answers concerning the directions of that relationship.

**Hypotheses**

On the basis of the conducted literature review described above, the following research hypotheses were devised.

- **H1** – people are more envious in situations when another person achieves success in which there is an element of subjectively perceived injustice of that success than in situations that do not have that element;
- **H2** – people are more envious towards strangers and distant acquaintances than towards friends and family;
- **H3** – people are more maliciously joyful (schadenfreude) in situations of another’s failure, when there is element of subjectively perceived justice, than in situations that do not have that element;
- **H4** – people experience stronger schadenfreude in situations of the failure of strangers and distant acquaintances than when misfortune happens to friends or family;
- **H5** – gender differentiates both envy and schadenfreude
Method

Participants
There were 248 people (180 women and 61 men, 7 people did not write their gender in the questionnaire) participating in this research, all of them were students of University of Wroclaw or Technical University of Wroclaw or participants of postgraduate courses. Mean age was 22 (SD=5.41), the youngest participant was 19 and the oldest - 51 years old.

Questionnaire
Our research was done in groups in which respondents filled “Questionnaire KZ’03”. It is “story-based” experimental research in 2x2 matrixes (injustice vs. no injustice x close acquaintance vs. distant acquaintance). The questionnaire was devised on the basis of interactional psychology, which assumes that in exploration of human behavior one should stress the role of interaction between situation and individual differences (Sosnowski, 1980). Researchers stressing the influence of the situation on human behavior found evidence of their assumptions in empirical research showing that there is a correlation between type of the situation and behavior (Lender, 1982; Mischel & Peake, 1982, in: Murtha, Kanfer, Ackerman, 1996). The devised questionnaire consists of a set of situations and possible behaviors (reactions) which can occur in those situations. The respondents’ task was to state, if and to what degree in each situation certain reactions will occur. The constructed measurement tool has two subscales, the first one measures envy, and the second one schadenfreude.

To measure envy, four categories of situations were used. The choice of the categories was made through analysis of the literature of the subject, in which researchers present empirical evidence that envy is caused by situations that create a subjective feeling of injustice and that we are more envious towards people that we do not like and are not our closest acquaintances and friends (Smith, 1991; Salovey, Rodin, 1986). The questionnaire also contained some situations that should cause envy with less intensity. These are situations that do not include a subjective feeling of injustice and refer to the success of friends or close acquaintances. The questionnaire contained the following categories of situations:
- Category I – Success of a distant acquaintance or a stranger with an element of injustice
- Category II – Success of a distant acquaintance or a stranger without an element of injustice
- Category III – Success of a close acquaintance with an element of injustice
- Category IV – Success of close acquaintance without an element of injustice

Each of the above categories was represented by two examples of situations. Exemplary item that represent category III is: “Your friend – although all his life he made fun of people playing number games - decided to play once for fun and won big amounts of money”.

In the questionnaire 11 reactions were used that are different emotional states, which according to theoretical concepts (Parrott and Smith, 1993; Parrott, 1991) and our own research results are indicators of feeling envious: I have a feeling of injustice, I feel inferior, I feel angry, I feel hostile, I feel sorry, I feel joyful, I feel aversion towards that person, I feel sorrow, I feel regret, I would like to have that thing or be in a similar situation, I would like that person not to be in that situation.

Similarly the subscale measuring schadenfreude contains four categories of other person’s failure. As in the case of envy here also situations differ in two dimensions – a feeling of the justice of a situation and closeness of relationship to the subject of schadenfreude. This subscale also includes descriptions of situations that should not cause malicious joy, or cause it only in small intensity – not justified failure of other person and failure of close acquaintances or friends. Below there are categories of situations measuring schadenfreude:
- Category V – Failure of a distant acquaintance or a stranger with the element of justice
- Category VI – Failure of a distant acquaintance or a stranger without an element of justice
- Category VII – Failure of a close acquaintance with an element of justice
- Category VIII – Failure of a close acquaintance without an element of justice

Like in the envy subscale, also here every category of situations is represented by two specific situations.

Out of eleven situations measuring envy mentioned above, the following seven were chosen for measuring schadenfreude: I have a feeling of injustice, I feel angry, I feel sorry, I feel joyful, I feel sorrow, I feel regret, I would like that person not to be in that situation. The main and direct indicator of schadenfreude is a reaction of joy concerning somebody’s failure. Remaining reactions are direct indicators of that emotion.

Participants were asked to determine the intensity of each of the given reactions (R1 to R11 in case of envy and R1 to R7 in the schadenfreude subscale) in the presented situations (S1 to S16), using a five-point scale:
1 – Will not be present at all
2 – Will be present with small intensity
3 – Will be present with medium intensity
4 – Will be present with high intensity
5 – Will be present with very high intensity

Table 1 presents the diagram of the interactional questionnaire filled in by a respondent. The first column contains descriptions of situations in which another person experiences success vs. defeat. The upper row presents reactions selected for envy and malicious joy research. The
other rows contain examples of participant’s assessment of reaction intensity (on a scale of 1 to 5) in the individual situations. The lower row of Table 1 contains sums of individual reaction intensity levels (R1 – R11 in the envy subscale and R1 – R7 in case of schadenfreude subscale) for all sixteen presented situations.

The interactive questionnaire contained 144 positions in total. The envy subscale consists of 88 positions (8 situations x 11 reactions), while the schadenfreude subscale – 56 positions (8 situations x 7 reactions). The Cronbach’s alpha of the envy scale was .94 and of the schadenfreude scale was .92.

**Indicators of envy and schadenfreude:**
The questionnaire devised enabled constructing one indicator of envy and two indicators of malicious joy that are described below:

- **Indicator of dispositional envy:**
  ✓ Sum of reaction in situations of other person’s success – it is the sum of intensity of all eleven reactions (the scale of reaction “I feel joyful” was of course inversed) in four situations describing other person’s success. A higher indicator shows higher envy.

- **Indicator of dispositional schadenfreude:**
  ✓ Sum of reaction in situations of other person’s failure – it is the sum of intensity of all eleven reactions (the scales of all reactions, except “I feel joyful” were of course inversed) in four situations describing another person’s failure. A higher indicator shows higher schadenfreude.

- ✓ Intensity of individual reaction - “I feel joyful” – in the situation of another person’s failure – the next indicator of schadenfreude is the sum of intensity of joy in four situations describing other person’s failure. I distinguished this reaction from the others because it is the only one that measures malicious joy directly.

**Results**

**Level of envy vs. injustice of situations and type of relationship**
The first stage of results analysis statistically verified what the hypotheses were suggesting, that in a situation of other person’s success, in which there is an element of subjectively perceived injustice, people feel more envious than in a situation lacking that element (H1) and people are more envious towards strangers and distant acquaintances than towards friends and family (H2). Table 2 contains descriptive statistics.

To verify hypotheses ANOVA statistical analysis was conducted in the 2x2 matrix (see chart 1). Results showed the existence of two main effects. The first one showed that, as was expected, much more envy was experienced in a situation in which there is an element of injustice, that is when success is not deserved, compared to situations, when success is just and deserved (F (1, 988) = 433.09,
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p < .001). This result confirms hypothesis 1. The next main effect showed, also as expected (H2), that we feel more envious towards strangers and distant acquaintances than towards friends and family (F (1, 988) = 94.38, p < .001). Statistical analysis also pointed out the existence of interactional effect, showing that an element of injustice in a given situation increases envy but much more towards “strangers/distant” people than “close” ones (F (1, 988) = 50.61, p < .001). Looking at this correlation from the other side we can conclude that only in a situation of the “undeserved” success of another person, the type of relationship differentiates the intensity of envy – it is much stronger towards “strangers/distant” people than “close” ones.

To summarize it is worth noticing that the results gathered confirm the proposed hypotheses (H1 – H4). As was expected, respondents experienced more envy in situations when another person’s success was not deserved or when it concerned someone distant or a stranger.

Gender and intensity of envy and schadenfreude

Chart 2. Schadenfreude and feeling of justice in situation and type of relation (ANOVA 2x2).

Level of schadenfreude vs. injustice of the situation and type of relation

In the next stage of analysis we verified hypothesis stating that people are more maliciously joyful in situations of another person’s failure, when there is an element of subjectively perceived injustice than in situations that do not have that element (H3) and that people experience schadenfreude more strongly in situations of the failure of strangers and distant acquaintances than when misfortune happens to friends or family (H4). Table 3 contains descriptive statistics.

Also in this case ANOVA statistical analysis was conducted in a 2x2 matrix (see chart 2). The results showed the existence of two main effects. The first one showed, as was expected (H3), that respondents were more maliciously joyful in situations of deserved misfortune than in situations where failure was not deserved or was not just (F (1, 988) = 439.28, p < .001). The next main effect obtained confirmed hypothesis 4. It showed that we feel more joyful when misfortune happens to distant acquaintances or strangers than when it happens to people close to us (F (1, 988) = 170.62, p < .001).

Statistical analysis showed also the existence of an interactional component which points out that the “injustice” of a situation has a stronger impact on schadenfreude towards “distant” rather than “close” people (F (1, 988) = 75.55; p < .001). So we can conclude that only in a situation of the “unjust” failure of others, the type of relation differentiates schadenfreude – it is much stronger towards “strangers/distant” people than “close” ones.

Gender and intensity of envy and schadenfreude

It is not clear based on the subject’s literature what kind of relation there is between gender and intensity of envy. An analysis to verify the hypothesis about the influence of gender on intensity of that emotion (H5) was conducted (see Table 4). Results of that analysis showed that there is no statistically significant difference between the general indicator of envy in women and men (t = 1.86, p < .07). Although the result was not statistically significant, it is worth noticing that the mean for women (mean = 175.4) was higher than for men (mean = 166.5). In the further phase of analysis we decided to find out whether there are types of situations in which men or women experience more envy.

Statistical analysis (Student’s t-test) showed that women, compared to men, are more envious in situations of a distant acquaintance or stranger’s success (Category I+II) and in situations that are perceived as not just (Category I+III). There is no statistically significant difference between women and men in situations of another person’s success that is deserved and as such perceived as just or
in situations of a close person’s success (Category II+IV; III+IV).

The next stage of analysis was an attempt to answer the question if gender is a moderator of schadenfreude. Similarly, as in case of envy, here also we could not determine the direction of that correlation, as in the literature on the subject there is no information about this relationship. Results showed that there is a statistically significant difference between men and women in experiencing schadenfreude. It appears that men experience it much more strongly than women (t = -2.99, p < .002). The mean for women is 171.5 and for men 185.9.

Next, as in case of exploring envy, we decided to find out if each discussed type of situation of failure is connected with a different intensity of schadenfreude in men and women. Table 5 contains the results of comparison of intensity of schadenfreude in men and women in all types of situations of other person’s failure.

The research results gathered and discussed above confirmed the proposed hypotheses. As was expected, respondents showed stronger envy in situations in which there was an element of subjectively perceived injustice and towards distant acquaintances or strangers. Also, intensity of schadenfreude was highest in situations in which there was an element of subjectively perceived justice - that is when the person deserved in any way the misfortune that happened. Gender also turned out to be a differentiating factor – women presented more intense envy and men – more intense schadenfreude.

### Discussion of Results

An analysis of the results of the research conducted showed that envy is experienced much more strongly in situations when success achieved by others is not deserved. This means that envy appears when we cannot find an objective justification of an advantage that another person has over us (Master and Smith, 1987, in: Smith, 1991; Parrott, 1991; Zizzo and Oswald, 2001, in: Smith and Kim, 2007; Parks et al., 2002). As stated earlier, people experience stronger envy in situations of the undeserved success of another person. Furthermore, our research showed that envy is mostly experienced toward a stranger, whereas the success of a close one does not evoke this emotion or does so only with low intensity. The latter result corresponds with research results showing that we feel stronger envy towards people who we dislike (Smith, 1991; Salovey and Rodin, 1986). Although, in our research we did not include a category of like-dislike, we did have a category of closer vs. distant relation, which corresponds to liking-disliking, as proven before.

### Table 4

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<tr>
<th></th>
<th>Mean for women</th>
<th>Mean for men</th>
<th>t</th>
<th>p</th>
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<tbody>
<tr>
<td>General indicator of envy</td>
<td>175.4</td>
<td>166.5</td>
<td>1.86</td>
<td>.07</td>
</tr>
<tr>
<td>Category I + II Success of distant acquaintance</td>
<td>94.6</td>
<td>87.8</td>
<td>2.63</td>
<td>.009</td>
</tr>
<tr>
<td>Category I + III Success of a person with an element of injustice</td>
<td>101.7</td>
<td>95.0</td>
<td>2.16</td>
<td>.031</td>
</tr>
<tr>
<td>Category II + IV Success without an element of injustice</td>
<td>73.6</td>
<td>71.3</td>
<td>1.02</td>
<td>.307</td>
</tr>
<tr>
<td>Category III + IV Success of close person</td>
<td>80.6</td>
<td>78.6</td>
<td>.78</td>
<td>.434</td>
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### Table 5

<table>
<thead>
<tr>
<th></th>
<th>Mean for women</th>
<th>Mean for men</th>
<th>t</th>
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<tbody>
<tr>
<td>General indicator of schadenfreude</td>
<td>171.5</td>
<td>185.9</td>
<td>-2.99</td>
<td>.002</td>
</tr>
<tr>
<td>Category V + VI Failure of distant person / stranger</td>
<td>92.8</td>
<td>98.4</td>
<td>-2.76</td>
<td>.006</td>
</tr>
<tr>
<td>Category V+VII Failure with an element of justice</td>
<td>96.4</td>
<td>102.2</td>
<td>-3.38</td>
<td>.001</td>
</tr>
<tr>
<td>Category VI+VIII Failure without an element of justice</td>
<td>75.0</td>
<td>83.3</td>
<td>-3.87</td>
<td>.001</td>
</tr>
<tr>
<td>Category VII+VIII Failure of close person</td>
<td>78.7</td>
<td>87.5</td>
<td>-4.23</td>
<td>.001</td>
</tr>
<tr>
<td>Being happy about somebody’s misfortune</td>
<td>9.4</td>
<td>10.6</td>
<td>-2.92</td>
<td>.004</td>
</tr>
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</table>
The research conducted showed that similar to envy, the intensity of schadenfreude also depends on the situation. As was expected, people are joyful about somebody’s misfortune especially in situations when they feel that it was deserved. This result is confirmed by previous research (Ben-Ze’ve, 1992; Feather and Sherman, 2002; Ortony et al., 1988; Smith, 1991; Smith et al., 1994). Also assumptions that schadenfreude is experienced especially intensively when misfortune happens to distant acquaintances or strangers were confirmed. This result is consistent with results obtained by Smith et al. (1996) as well as Learch et al. (2003) in which they proved that the less a person likes someone, the more they are happy about this person’s misfortune.

The results of research conducted showed that women have a higher capacity to envy, and men more often are joyful about someone’s failure. The results of questionnaire research show that men are more prone to experience schadenfreude regardless of the situation. The failure of others makes them happy when it is deserved as well as when it is not justified in any way. Also, men experienced malicious joy more strongly than women, regardless of the closeness of relations with the person that the misfortune happened to. This means that even when misfortune happened to close people and friends who did not deserve it, men were more joyful than women. Research also showed that, not in all types of situations, women experience stronger envy than men. Women tend to be more envious than men only in situations of the success of a distant person or a stranger and when another person’s success is not just, that is not deserved. In the literature on the subject there is no research on the relationship between gender and envy or malicious joy.

Why do women tend to be more envious, and men tend to be more joyful about other person’s failure? This result is a new one, and should be explored more in the future. At this point we can try to speculate. Stronger joy in men could be caused by the need to dominate, which is characteristic for that gender. Another person’s misfortune causes improvement of one’s position. It is a fact that the currently hierarchical setting among people is primarily symbolic and may be done on the basis of achievements or possessed resources. Schadenfreude, more intensely presented by men, corresponds to the evolutionary-advantageous positional bias, as stipulated by Hill and Buss (2006). The level of satisfaction of possessed resources results from their relation to what others possess rather than from their absolute value. In case of men, the “others lose – I gain” rule seems to be in place, giving them reasons for malicious joy regardless of whether the loss is just vs. unjust or whether it concerns a close vs. distant person. Opposite the case of women, for men status and high hierarchy position are particularly important. A higher level of empathy (Goleman, 2007), which, in situations when others experience misfortune, causes women to feel sympathy rather than joy, is another argument explaining the lower level of schadenfreude in case of women. In each type of analyzed situations, the differences in schadenfreude levels between men and women were highly significant (see Table 5).

The highest level of envy, both in case of women and men, was presented in the same situational categories – unjust success and success of a distant person. Simultaneously, there were gender differences – women turned out to be significantly more envious in both these situations. This may result from the strong tendency to react emotionally to the surrounding reality, characteristic of women (LaFrance, Banaji, 1992; Grossman, Wood, 1993). Higher emotionality makes it easier for women to create social bonds based on interpersonal sensitivity. Women’s strong emotional reaction to the undeserved success of others may be a manifestation of their interpersonal sensitivity, which may be expressed by a stronger reaction to injustice, among others.

The conducted research differs from present research in two areas. The first one is a qualitatively different method for measurement of envy and schadenfreude. The other one – verification of dependencies detected in other cultural conditions. Present empirical data indicate the existence of cultural differences in understanding and experiencing of the feeling of envy (Hupka et al., 1996; Hupka et al., 1997; Stepanova & Coley, 2002; Kim & Hupka, 2002). The method used in our research is an interaction questionnaire (situation x reaction) that enables precise measurement of the intensity of various reactions in the analyzed situations. The word “envy” does not appear in the instructions or reaction descriptions, which is an advantage in case of diagnosis of socially unacceptable emotions and which additionally differentiates the instrument from questionnaires used in the cited research. The consistency of results achieved using various diagnostic tools may be interpreted as an additional measure of the accuracy of the tool created by authors.

References


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