Perceived Impact of One's Action, Feels to Motivate Others to do the same

Ilse E. G. Jansen

University of Utrecht

Name:	Ilse Jansen
Student nr.:	5959667
Words:	
Master:	Social and Organizational Psychology
Master track:	Social Psychology
Faculty:	Social Sciences
University:	University of Utrecht
Datum:	20th of April, 2018

In the current study, it is studied if feeling observed during one's action, makes one perceive it's action as having more impact and if this makes people think that they influenced others around to pursue the same action. In this study the action is buying organic products in an organic supermarket. It is found that being observed does not affect the perceived impact one's action has and it also does not affect the feeling that others are influenced by one's own action, to pursue the same action. Perceived impact turned out to significantly affect the influence one thinks to have on others to pursue the same goal. Shared reality (sharing perspectives with others) and the magnification of one's action (the action feels bigger and more valuable) is the expected mechanisms behind this effect. This study also showed that the perceived impact of one's action and the feeling that others pursue the same goal could have a motivating effect on pursuing one's goal. This study shows new aspects on what motivates people to pursue their goals, specifically the goal of buying organic products.

Keywords: organic products, observed, impact, influence others, shared reality, magnification

Organic practices like organic farming, research on organic products and the selling of organic products, are growing every year. The organic market has increased almost five times between 1999 and 2013 and in 2016 this growth was expected to be doubled in 2018 (Reganold & Wachter, 2016). Supporting the organic market by buying organic food has a couple of benefits in comparison to the non-organic market. Benefits are for example less hazardous pesticides on food, the food is more nutritious and organic farming is more environmentally friendly (Hughner, McDonagh, Prothero, Shultz, & Stanton, 2007; Nandwani, 2016; Pearson, Henryks, & Moffitt, 2007). The most important motivation for customers to buy organic products is because it is healthy, because of the quality of the food and because it is environmentally friendly (Pearson, Henryks, & Jones, 2011; Pearson, Henryks, & Moffitt, 2007).

This research studies how the presence of others, especially of observers, affects one's thoughts about and motivation to buying organic products. The presence of observers increases peoples' speed and performance in simple, well-practiced tasks, whereas it decreases performance in complex tasks (Steinmetz, Xu, Fishbach, & Zhang, 2016, p. 852). "The presence of others can also affect people's perceptions of their own actions" (Steinmetz et al., 2016, p. 852). One's speed, performance, and attitude on an action can signal the degree of motivation for a task. Motivation is "the psychological force that enables action" (Touré-

Tillery & Fishbach, 2014, p. 328). It has already been studied for years what influence the presence of others has on motivation. "Social cues that signal an invitation or an opportunity to work with others can inspire intrinsic motivation (Carr & Walton, 2014, p. 169). For example working in the presence of others and observing the performance of others affects people's effort and motivation (Carr & Walton, 2014, p. 170), called respectively *social facilitation* (Zajonc, 1965) and *social comparison* (Kerr et al., 2007). There have been different studies for many years about the effect of the presence of observers on people's perception on and motivation of their actions, which will be studied in the current research in a different way than has been done before.

This research will focus on a mechanism for motivation that has, by my knowledge, not been studied before. In this research it will be studied if being observed while doing an action, can give people the feeling that their action has more impact, than when not observed. This feeling of impact is expected to give people the idea that they influenced others to pursue this same action, which is assumed to have a motivating effect on pursuing this action. Specifically the action will be buying organic products and the people present will be the other people in the organic supermarket. It will be explained which studies support the assumptions in this hypothesis.

Hardin & Higgins (1996) shows that the mere presence of people around a person, motivate this person to share reality with these people. Sharing your reality means establishing a shared understanding of the world with someone else. People have a fundamental drive to share their reality. Sharing your reality can be done by talking to others about their thoughts, beliefs and inner states and in this way search for common ground (Echterhoff, Higgins, & Levine, 2009; Smith & Mackie, 2016). But there can also be an illusion of shared reality when people unconsciously or consciously without talking, combine the conceptions they make of other's thoughts and intentions, with their own (Keysar & Barr, 2002; Smith & Mackie, 2016; Steinmetz et al., 2016).

Shared reality has several effects on people. Both communicated and illusionary shared reality create a bond and common ground with the person with whom the shared reality is established. This facilitates the possible pursuit of a shared goal or some other form of cooperation (Steinmetz & Pfattheicher, 2017). People project their own attitudes on the other person when the shared reality is established (Van Boven & Loewenstein, 2003). The other way around, people also adjust their own attitudes to the attitude they think the other

has. For example when the other seems to like a product, the person itself also rates the product more positively (Echterhoff, Higgins, Kopietz, & Groll, 2008). Therefore when one establishes an illusion of shared reality with someone present around this person, the person who establishes the shared reality will adjust his or her thoughts, beliefs and inner states to the other one and will also belief that the other one has thoughts, beliefs and inner states similar to his' or hers' (Fishbach et al., 2016; Steinmetz & Pfattheicher, 2017; Van Boven & Loewenstein, 2003).

People share realities more easily and more strongly when the people around them feel like ingroup members (Echterhoff, Higgins, Kopietz, et al., 2008). People feel like ingroup members when they are part of the same social identity, which they create themselves to be able to order their social environment (Tajfel & Turner, 1979). People can socially identify with people around when they share attributes, traits, preferences or choices made (Bartels & Onwezen, 2014; Gerard & Hoyt, 1974; Shteynberg & Galinsky, 2011). Specifically for the current study, people buying organic products feel like ingroup members, because they share a preference and choice for buying organic products (Bartels & Onwezen, 2014).

When people present around a person observe this person, shared reality will be even stronger. "The greater the number of observers, the larger is the extent of shared reality, and thus the larger the amplification effect of being observed" (Steinmetz et al., 2016, p. 861). Being observed while performing an action, like buying organic products, makes ones action feel bigger, more valuable and more substantial than the action was in reality and gives the feeling that the action has more impact than it has in reality. This is called magnification of one's action (Fishbach et al., 2016; Steinmetz et al., 2016). Magnification happens because inducing shared realities and the illusion of shared reality makes people add the perspective of the other to their own perspective (Fishbach et al., 2016; Steinmetz et al., 2016; Steinmetz & Pfattheicher, 2017). Only being conscious of the fact that you were observed, just after the action is enough to magnify one's action via adding the perspective of others around (Steinmetz et al., 2016). So being observed during an action or being told that one has been observed after one's action, magnifies one's action via shared reality.

Magnified action, and thus thinking that one did more, is speculated by Steinmetz et al. (2016) to increase the impact one perceives its action has. For that reason I expect that if people feel that their action of buying organic products is magnified by shared reality, induced by being observed, that they will perceive their action of buying organic products to have

more impact. I speculate that the feeling of impact could be the impact on sustaining the environment, on their own health or on sourcing food with quality (Pearson, Henryks, & Jones, 2011; Pearson, Henryks, & Moffitt, 2007). The feeling that one's action has impact could have a motivating effect, when looking at the paper of Touré-Tillery and Fishbach (2017). Touré-Tillery and Fishbach (2017) found that the perceived impact of one's action, has a motivational effect to pursue a social action, like donating to charity. The perceived impact functioned as a mediating factor between the perceived distance of oneself to the recipient of a charitable action, and the willingness to donate to charity.

Ones perceived impact, I expect, affects the feeling that others are pursuing the same goal. This in turn can boost motivation to pursue this same goal, as discussed before (Shteynberg & Galinsky, 2011; Koo & Fishbach, 2008). The reason why I expect the feeling of impact of one's action to influence the feeling of influencing others to pursue the same goal, is because of magnification and the illusion of shared reality as an underlying mechanism. The illusion of shared reality makes people project one's own thoughts, beliefs and inner states on others and adjust their own perspective to the expected perspective of the others (Echterhoff, Higgins, Kopietz, et al., 2008). Magnification makes one believe it's action is valuable and big and next to that one feels one's action has impact (Fishbach et al., 2016; Steinmetz et al., 2016). Therefore if one believes others, with whom the reality is shared, have seen its action and also will have the same view on things, than these people also see the impact of this valuable action. I expect that one will feel then, that others will be influenced by their action, in this research buying organic products, to also pursue and keep on pursing this action of buying organic products.

The feeling that others are performing the same individual action or are pursuing the same goal, is shown in past papers to have a motivating effect for this person to continue pursuing this goal. Buying organic products with the goal to sustain the environment can be seen as a shared goal, which means that many individuals share the same goal and purchase this goal by themselves (Shteynberg & Galinsky, 2011). When many individuals buy organic products themselves, but all with the same shared goal, the chance of reaching the shared goal of sustaining the environment is bigger. Past papers have found that people who were contributing to a shared goal, like supporting charity, were motivated to continue pursuing this goal when they saw or heard that other ingroup members were contributing as well

(Shteynberg & Galinsky, 2011). It can thus be assumed that the idea that other people pursue a shared goal strengthens ones motivation to pursue this goal.

The other reasons which people have to buy organic products, are individual goals like health and quality of the food (Pearson, Henryks, & Jones, 2011; Pearson, Henryks, & Moffitt, 2007). Also for individual goals it is found that when others pursue the same goal alongside one another, the interest and motivation for goal related activities is boosted. Especially people who are high in interpersonal orientation showed an increased motivation to pursue goal related tasks when working alongside with peers, than without peers (Isaac, Sansone, & Smith, 1999). In the paper of Carr and Walton (2014) it was found when people, in this case students, did a puzzle and thought that another person was doing the same puzzle, then their motivation to persist and their intrinsic interest on solving the puzzle was significantly higher, than for people who thought there were no others doing the same puzzle. Therefore, I suspect that when people think that others were influenced to pursue the same action, this could increase their own motivation to pursue that action in the future.

In the current study it will be studied what effect being observed (being observed vs. not being observed), while buying organic products, has on the feeling that you influenced others to buy organic products. In easier terms, this will be called the effect of *being observed* on *the feeling of influencing others*. Furthermore, it was studied if the perceived impact of one's action of buying organic products mediates this relationship. This variable I will call *perceived impact*. The hypothesis is that being observed makes people feel that their current action of buying organic products has more impact, through the mechanism of shared reality and magnified action, which in turn is expected to make people feel that they influenced others to buy organic products.

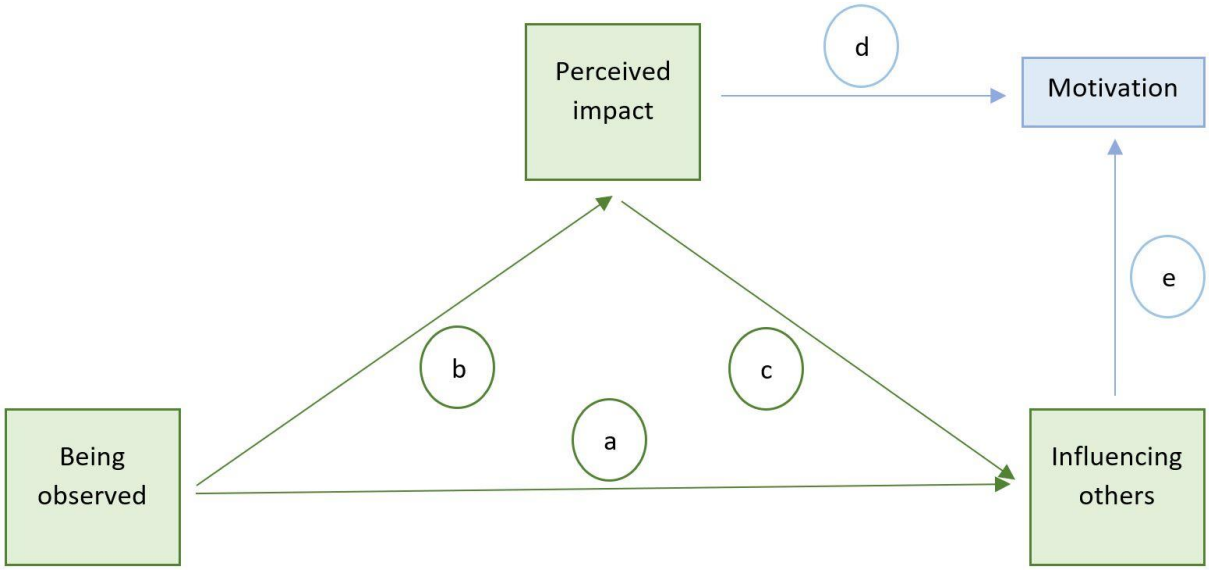


Figure 1. Direct pathway (a), first part of the hypothesis (b), second part of the hypothesis (c), expected effect (g and h).

Finding if this is the case will gain new knowledge for motivation research. There are several studies about the effect of the presence of others and of observing others on people's behavior and motivation (Fishbach, & Steinmetz, 2016). By my knowledge, it has not been studied before what the effect of perceived impact is on the feeling that others are influenced to pursue the same action, which are both speculated to have a motivating effect. This knowledge can also be used by organization to know how to motivate customers to buy organic products, for example by the presence of others or by giving people the feeling that they made an impact. Stimulating customers to buy organic products will help sustain the environment and create nutritious food (Nandwani, 2016).

Method

Participants and Design

In total 120 participants took part in the study (37 man, 78 women, one other defined gender, M_{age} = 46.99, SD = 15.23). They were recruited for a one-factorial (being observed vs. not being observed) between-subjects design. Per condition, the sample size was 60

participants. The sample size was determined based on an effect size of $d = 0.55$ derived from the study of Steinmetz et al. (2016), which would provide 85% power for detecting the effect size. The current sample provided 37% power for detecting a small effect ($d = 0.30$)

An experimenter was standing right outside the organic supermarket Ekoplaza, located in the Ziekerstraat in Nijmegen, asking customers who left the Ekoplaza if they wanted to participate by filling in a questionnaire of two minutes. The questionnaires were handed out in November, just before Saint Nicholas event and Christmas busyness, during week and weekend days. This was done in eight days on random hours between 11:00 and 19:00. The hours that the experimenter was handing out questionnaires were random because it had to be fitted around her agenda.

The experimenter specifically targeted customers who had just paid for groceries and were at least 18 years old. Additionally, customers who were distracted were not targeted, meaning: customers accompanied by children, deaf or blind customers, customers who seemed distracted, and customers who are friends or family of the experimenter. Besides that, the experimenter took every opportunity to ask people to participate, so the experimenter could not make one's own selection of participants. The experimenter would only ask a new person to participate if the other participant would be finished with the questionnaire and handed it in. In this way there would always be one participant at a time, talking to the experimenter and filling in the questionnaire. This was done so the participants would not know that they were treated differently than other participants, because of the condition they were put in. This will be explained in the next section.

With eleven participants, the procedure did not go as it should: five participants did not fill in all the questions, one participant seemed to not understand Dutch, one participant was 17 years old, and four participants were by accident put in the control instead of the observation condition. All participants retained in the analysis, since the pattern and significance of the results remained the same when removing or retaining these participants.

Procedure

The participants were randomly assigned to one of the two conditions (being observed vs. not being observed), by handing out a questionnaire with a tree symbol up or down. Of the

120 questionnaires, 60 had a tree symbol up on the front page, meaning the participant would be part of the observation condition, and the other 60 questionnaires had a tree symbol down, belonging to the control condition. The questionnaires were put in a random order, using an online random number generator. After a participant was asked to participate and agreed, the experimenter would pick the top questionnaire out of a folder and then see the tree symbol, meaning which condition the participant would be part of (being observed vs. not being observed). In this way the experimenter was blind to the conditions and could not be biased in how to act towards the participants. Also the participant would not be able to see that there is a difference between the questionnaires front page. This randomisation and blind picking of the questionnaires was also done to even out existing differences between people in the two conditions (being observed vs. not being observed).

Participants in the observation condition were told, just before they would start filling in the questionnaire, "Oh by the way, I observed you while you were shopping organic products." Participants in the control condition were not told this. The experimenter did not observe specific people more than others, but just stood outside the organic shop and looked around. Telling the participants afterwards that they were observed, stimulates the participants to add the perspective of the others around them (Steinmetz et al., 2016), which is necessary to make the perceived impact of one's action bigger via shared reality and magnification. Telling it afterwards, also makes sure that the participants will not be influenced by the remark, in their action of buying organic products.

To make sure that the experimenter behaved the same towards every participant, a script was written (see Appendix 4). This script described how to ask people to participate, what to say when they agreed to participate, what to say to people in the observation and control condition and how to react to certain questions or remarks of the participants. The experimenter stayed at a proper distance with every participant and behaved friendly neutral towards everybody. If the experimenter would say something not according to the script, this was written down at the back of the questionnaire as a remark.

Material

The questionnaire was modelled after Touré-Tillery and Fishbach (2017) and translated to Dutch. The Dutch questionnaire is shown in Appendix 1, 2 and 3. Participants

rated two items which measured perceived impact (α = .88), asking "whether the participant felt, that day, that buying organic products was an important contribution to the environment" (1 = *not at all*, 9 = *very much*) and "whether the participant felt, that day, that he/she made an impact on preserving the environment, by buying organic products" (1 = *not at all*, 9 = *very much*). Furthermore, participants rated two items which measured the feeling of influencing others (α = .90), asking "how much the participant felt that others were motivated to buy organic products, by the participant's action of buying organic products" (1 = *not at all*, 9 = *very much*) and asking "how much the participant felt that others were influenced in buying organic products" (1 = *not at all*, 9 = *very much*).

After that, the participant's general attitude towards buying organic products was measured by two items (α = .77) asking "to what extent the participant finds it important that organic products are bought" (1 = *not at all*, 9 = *very much*) and "to what extent the participant thinks that buying organic products has a contribution to sustaining the environment" (1 = *not at all*, 9 = *very much*). This variable will be called *general attitude*. The being observed manipulation (being observed vs. not being observed) was checked by asking "how much the participant felt observed while shopping organic products" (1 = *not at all*, 9 = *very much*). At the end the participants filled in their age, gender and mother tongue.

Results

The first part of the hypothesis is about the effect of being observed on perceived impact and on the feeling of influencing others. Perceived impact did not differ between the observation condition (M = 6.22, SD = 1.98) and the control condition (M = 6.15, SD = 2.13) $t(115) = -0.182$, $p = .856$, $d = 0.03$. The feeling of influencing others also did not differ between the observation condition (M = 3.63, SD = 2.38) and the control condition (M = 3.46, SD = 2.33) $t(115) = -0.384$, $p = .701$, $d = 0.07$. The manipulation check confirmed this. As a manipulation check, the participants reported how much they felt observed while shopping organic products. Participants did not feel more observed in the observation condition (M = 1.72, SD = 1.54) in comparison to the control condition (M = 2.21, SD = 2.26) $t(114) = 1.340$, $p = .183$, $d = 0.25$. Since the observation condition (being observed vs. not being observed) did not affect the two dependent variables, the first part of the hypothesis is rejected.

Therefore, perceived impact will not function as a mediating variable anymore, but its relation with the feeling of influencing others will still be analysed in a regression analysis. Perceived impact significantly affects the feeling of influencing others (β = .535, *SE* = .094, *t*(116) = 5.681, *p* = <.001, 95% CI = [0.349, 0.722]. This means the second part of the hypothesis is confirmed. In other words, when people felt that their action of buying organic products had more impact, they also felt that they influenced others more towards buying organic products.

Outside of the main hypothesis, it was found that both perceived impact and the feeling of influencing others have a significant relation with the control variable general attitude. This control variable was tested in a regression model in relation to perceived impact and the feeling of influencing others, because it correlated high in a significant way with perceived impact (r = .62, p = .000) and the feeling of influencing others (r = .29, p = .001). A participant's feeling that its action has impact, relates significantly with the general attitude, which is that buying organic products is important and has an impact on sustaining the environment (β = ,397, *SE* = ,047, *t*(116) = 8.411, *p* < .001, 95% CI = [0.303, 0.490]. The feeling of influencing others is also significantly related to general attitude (β = ,165, *SE* = ,050, *t*(116) = 3.291, *p* = .001, 95% CI = [0.066, 0.264]. Perceived impact and the feeling of influencing others are both significantly related to general attitude.

The other control variables were also checked if they correlated with the main variables. No control variables showed a significant relation with being observed, perceived impact and the feeling of influencing others, except for general attitude. There was no difference in age between the observation condition (*M* = 45.67, *SD* = 15.35) and the control condition (*M* = 48.15, *SD* = 15.15), *t*(114) = 0.874, *p* = .384, *d* = 0.16. For gender there was no difference between the observation condition (*M* = 1.70, *SD* = 0.46) and the control condition (*M* = 1.68, *SD* = 0.51) *t*(114) = -0.291, *p* = .771, *d* = 0.04. There was no difference in language between the observation condition (*M* = 1.11, *SD* = 0.46) and the control condition (*M* = 1.15, *SD* = 0.51) *t*(114) = 0.376, *p* = .469, *d* = 0.08. General attitude also did not differ between the observation condition (*M* = 7.91, *SD* = 1.49) and the control condition (*M* = 7.85 , *SD* = 1.16) *t*(115) = -0.221, *p* = .825, *d* = 0.04. The control variables gender, language, age and general attitude did not differ significantly between the two conditions (being observed vs. not being observed), meaning the randomization was successful.

From all the analyses it can be concluded that the first part of the hypothesis is rejected and the second part confirmed. In other words, being observed does not affect perceived

impact and the feeling of influencing others. Perceived impact significantly affects the feeling of influencing others. Both perceived impact and the feeling of influencing others significantly relate to the control variable general attitude.

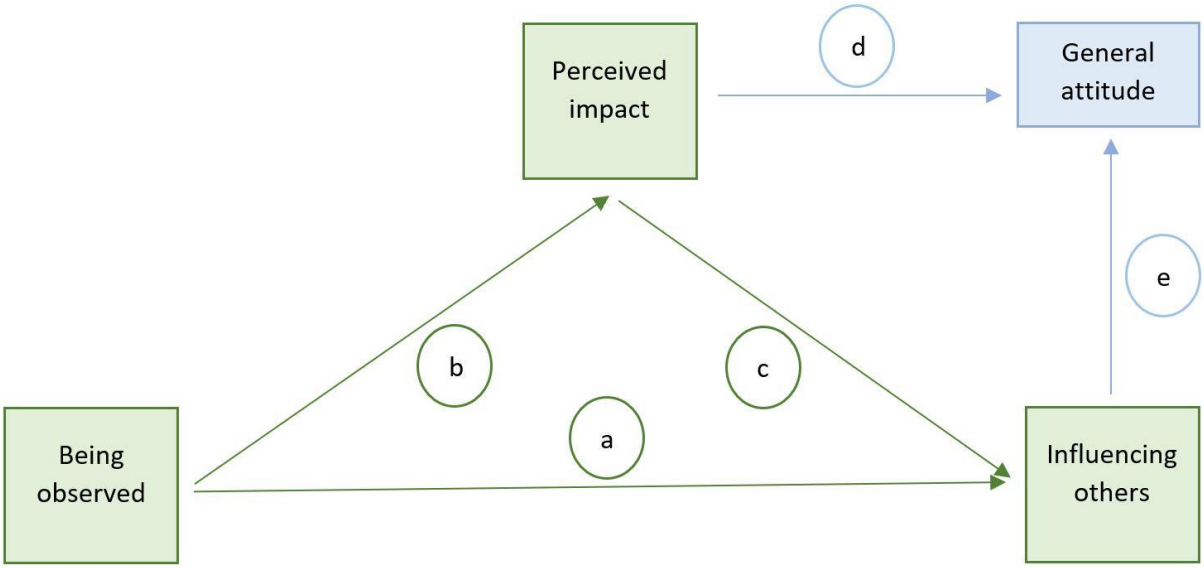


Figure 2. The first part of the hypothesis (b) and the direct pathway (a) are not confirmed. The second part of the hypothesis (c) is confirmed. Path d and e turned out to be significant.

Discussion

The current study hypothesized that being observed while shopping organic products would increase the perceived impact of buying organic products, through the mechanism of shared reality and magnified action. Being observed by ingroup members stimulates the tendency to share reality, which makes one add the perspective off the other to its own and think that the other has the same perspective. By adding the perspective of the other, one's action is magnified, thus is perceived bigger, more valuable and more substantial. When one's action is magnified I expect that one's action is perceived to have more impact. This, I expect, stimulates the feeling that others are influenced to pursue the same action, by one's own action of buying organic products. This is speculated, because the participant feels that it's action has more impact and thinks that the others around have the same perspective on things via shared reality. The results showed that the hypothesis that being observed affects perceived impact and the feeling of influencing others is rejected. The results confirmed that perceived impact significantly affects the feeling of influencing others. The results also

showed that perceived impact and the feeling of influencing others both have a correlation with general attitude. Several conclusions may be drawn, when looking at the results.

The hypothesis that being observed affects the feeling of influencing others and affects perceived impact, is not confirmed. I speculate that being observed did not have any effect, because in the results it is shown that people in the being observed condition did not feel observed in comparison to the not being observed condition. The results also showed that being observed did not affect perceived impact and the feeling of influencing others. The reason that people did not feel observed, could be that the manipulation did not work. It might be that the participants did not believe that the experimenter was observing them while buying organic products, since the experimenter who told them that they were observed by her, was standing outside the organic supermarket. The experimenter was standing outside, next to the entrance of the supermarket and looked through the windows of the organic supermarket and could see the participants shopping and paying. Still the participants might not have noticed this or forgotten this while shopping, since it was hard to see the experimenter through the windows. For that reason I speculate that the participants might not have felt observed, even if they were told after shopping.

Research of Steinmetz et al. (2016) confirms this idea. This research did show that telling participants afterwards that they were observed, did magnify their action and thus, I expect, would lead to an increased impact. But in the research of Steinmetz et al. (2016) participants could more easily believe that they were being observed through the window, which was in an experimentation room and was constantly in close sight. A person also walked by past the window a couple of times. When the experimenter afterwards told the participants that they were observed, the experimenter also pointed at this window to make it salient (Steinmetz et al., 2016). In the current research it was not made salient how the experimenter observed the participants and it was also not that obvious for the participants that they could have been observed while shopping organic products.

Another reason why people did not feel observed, could be because of the translation of the questionnaire from English to Dutch. In English the word *observed* could mean something else than the word *observeren* in Dutch, even if it is a literal translation. When the question for example would be, if they felt seen (*gezien* in Dutch) by others while shopping organic products, it would still measure what I want to know, namely if people felt that others have seen their action. But the question would have a different connotation and people might

have rated the question differently. Although, if people did feel seen, but not felt observed in my study, than there should still be a difference between the two conditions (being observed vs. not being observed) in how much impact people felt that their action had. This could give us the information that the manipulation of being observed did work, but being observed did not affect perceived impact and the feeling of influencing others, which is relevant to know. I thus conclude that the results if people felt observed could be measured in a slightly different way, to figure out if people really felt observed or seen by others around.

The second part of the hypothesis is confirmed, which is that perceived impact affects the feeling of influencing others. Perceived impact, with shared reality and magnified action as mechanism, was expected to give people the idea that others were stimulated by their action of buying organic products, to pursue this goal as well. This was expected, because if people would feel observed, then they would be conscious of the observers around them, feel the tendency to share reality and add the perspective of the others to their own (Keysar & Barr, 2002; Smith & Mackie, 2016; Steinmetz, et al., 2016). This makes people think one's action feels magnified, thus big and valuable, which also, I expect, makes one perceive its action to have more impact (Fishbach et al., 2016; Steinmetz et al., 2016; Steinmetz & Pfattheicher, 2017). When people think that the others have the same perspective on things, through shared reality (Van Boven & Loewenstein, 2003), they probably think that the others have the same perspective on the action of buying organic products as they have.

In the current research it turned out that people did not feel observed. If the others around felt like ingroup members, they could still be stimulated to share realities with others around and thus, through shared reality, add the perspective of the others. This could still make them think that the others look at buying organic products in the same way, which is that the action has impact. And thus feel that the others probably also want to pursue this action. This is also what was found, namely that perceived impact indeed turns out to significantly affect the feeling of influencing others. Though we should be cautious to suspect the mechanism behind this, which I just explained, since it was not studied if people shared reality and felt like ingroup members.

The results also showed that perceived impact also significantly affects the control variable general attitude. General attitude can be seen as a degree to measure motivation to buy organic products. When a person is motivated to pursue a certain goal, this person will evaluate goal-related objects more positively. So when a participant says that it finds buying

organic products important and thinks it has an effect on sustaining the environment, which is showed by a high scored general attitude, then this shows motivation to buy organic products (Touré-Tillery & Fishbach, 2014). General attitude would be a stronger measure of motivation though, if a third question would be added, which is measuring how frequent a person performs goal congruent actions (Touré-Tillery & Fishbach, 2014), in this case buying organic products. The two questions in the current study measuring general attitude, can still indicate if someone is motivated to buy organic products, but should not be seen as a complete way to measure motivation.

The relation could also be in the other direction, which is that general attitude affect perceived impact, since I found a correlation and no causation. If "the evaluation of goal-relevant objects is more positive for active goals than for inactive ones" (p. 330,Touré-Tillery & Fishbach, 2014), then people might think that their action of buying organic products is positive, since it is an active action. And when they perceive their action as positive, they also might perceive the impact of the action as more positive. Thus the perceived impact could be stronger when one evaluates one's action as positive. This is an assumption which should be studied to be sure if this is the case.

The current study showed that general attitude is affected not only by perceived impact, but also by the feeling of influencing others. Shteynberg and Galinsky (2011) found that "participants pursued goals more intensely when they were aware that similar others were experiencing the same individual goal" (p. 1293). Furthermore, the study of Koo and Fishbach (2008) showed that people who were contributing to a shared goal, like supporting charity, were motivated to continue pursuing this goal when they saw or heard that other ingroup members were contributing as well. Furthermore, people perceive their action as more positive when an ingroup member seems to find this action positive (Echterhoff, Higgins, Kopietz, et al., 2008). When a person thinks the other is influenced to pursue the same goal, then this other person probably finds this action positive. When ones action is perceived more positive, motivation might increase, since motivation can be measured by how positive one rates goal-related objects (Touré-Tillery & Fishbach, 2014). Therefore I assume that the feeling that others were influenced by one's own action of buying organic products, has a motivating effect, which can be measured by general attitude.

Since the current research shows correlation and no causation, it could also be the case that the motivation, measured as general attitude, affects the feeling that others were influenced to buy organic products as well. A reason why this could be the case, I assume, is

because via shared reality, one thinks that the other has the same perspective on things (Van Boven & Loewenstein, 2003). Therefore if one feels motivation for one's action, then this could make one think the other people around probably also feel motivation for this action. This might strengthen the feeling that others will pursue the same action, fueled by this motivation. Again, this should be studied to confirm this relation.

Before I discuss the limitations I will summarize what I concluded. It was rejected that being observed influences perceived impact and the feeling of influencing others. This can be the case, because the being observed manipulation did not make people feel observed. Though future research should find if it could also be the case that being observed does not affect people when they are buying organic products in an organic supermarket. The hypothesis that perceived impact affects the feeling of influencing others is confirmed. I expected this, shortly said, because shared reality makes one think that the other has the same perspective on things and thus would also pursue the same action. It is also found that there is a correlation between motivation, measured as general attitude, and both being observed and the feeling of influencing others. For both directions I made some assumption why this correlation could be there, but future research should confirm these assumptions.

The reason that the being observed manipulation did not make people feel observed, could be because some things should be conducted differently. When comparing the current research to research of Steinmetz et al. (2016), I got some ideas of what to change in future observation manipulations. One thing which might have caused people to not believe that they were observed, is that it was not made salient how the participants were observed when they were told that they were observed. Future research could make sure that an experimenter would point at the medium or direction in which the experimenter observed the participant and the experimenter could literally say how the participants were observed.

It could also have been more obvious during the participant's action of buying organic products, that they were observed, by letting the experimenter walk by or stand at a point where participants could consciously see during shopping that they could be observed. Furthermore, it should be tested if in Dutch it makes a difference when the question is if people feel seen or feel observed. It could also make a difference when the experimenter would say that he or she has seen the participants shopping organic products instead of observed them. Therefore in future research the experimenter could make it more salient during the action that the participants could be observed and when being told how they were observed. Furthermore, the word *seen* instead of *observed* could be used.

Another limitation could be that I expected shared reality and magnification of one's action to be the mechanism via which being observed affects perceived impact, but I did not measure that. Since being observed does not affect perceived impact, I still expect that shared reality and magnification could have taken place, but that should be confirmed in future research. Magnification is explained through studies in many ways with different terms. For example magnification is called augmentation of one's action, one's action feels bigger, more substantial or more valuable (Fishbach et al., 2016; Steinmetz et al., 2016; Steinmetz & Pfattheicher, 2017). By measuring before being observed and after being observed how big or valuable or substantial ones action feels, one could measure how magnified ones action feels after feeling observed.

One factor that could be measured to see if shared reality can be stimulated, is if the people around feel like ingroup member (Echterhoff, Higgins, Kopietz, et al., 2008). In the current experiment the other customers around the participants feel like ingroup members (Bartels & Onwezen, 2014) since they share traits and preferences about organic products (Gerard & Hoyt, 1974; Shteynberg & Galinsky, 2011; Tajfel & Turner, 1979). Other things that show if a person shared reality with another person, is to measure if one felt that the other perceives certain things the same way. Next to measuring if people share the same perspective and feel that the others are in-group members, which could give knowledge about shared reality, it would also be relevant to measure if people magnified their action. Measuring if both shared reality and magnification took place, can give more knowledge on the mechanism behind wat strengthens perceived impact.

Shared reality becomes stronger when there are more people around who observe a person (Steinmetz et al., 2016). In the current experiment it was not controlled how many other customers were around the participant. Since the experimenter has handed out questionnaires throughout the whole day, there is a difference between the participants in how many other customers were around who could observe the participant and with whom the participant could share realities. This also probably affects the perceived impact. Future research could control the amount of people around the participant more if the experiment would for example be run each day at the same two or three hours and it could be documented. The relation that is found between both perceived impact and the feeling of influencing others and general attitude can still be taken seriously. Controlling or

documenting the amount of people around the participant would only make it easier to make conclusions on the effect of people present around the participants.

The last important note for future research, is that motivation could be studied more thoroughly on this topic. When one is motivated to pursue a certain goal, this person will evaluate goal-related objects more positively. So when a participant says that it finds buying organic products important and thinks it has an effect on sustaining the environment, which is showed by a high scored general attitude, then this shows motivation to buy organic products (Touré-Tillery & Fishbach, 2017). It would be a stronger measure of motivation though, if a third question would be added, measuring how frequent a person does goal congruent actions (Touré-Tillery & Fishbach, 2017), in this case how often a person buys organic products. There are more things to keep in mind when measuring motivation, like what type of motivation one wants to measure and how the circumstances of the measures may capture different dimensions of motivation (Touré-Tillery & Fishbach, 2017). Future research should explore how motivation can be measured most accurately and then study the motivational aspect of perceived impact and the feeling that others are influenced to pursue the same goal.

To summarize, in future research it is relevant to see if making more salient that people are being observed and if using a different word like *seen* instead of *observed*, *gezien* instead of *geobserveerd* in Dutch, would make people feel observed while shopping organic products. It would also be better if it would be documented or controlled how many customers and other people are around the participants. Furthermore, it would be interesting to analyse the mechanism behind ones action which is perceived to have more impact, affecting the feeling that others were influenced to pursue the same goal. These mechanisms are shared reality with ingroup feeling as one of its factors and magnification of one's action. It is also relevant to research in more detail if perceived impact and the feeling of influencing others have a motivating effect.

It can be concluded that in the current experiment it was not confirmed that being observed while buying organic products, makes customers perceive their action of buying organic products as having more impact. It is confirmed that the perceived impact of the customer's action of buying organic products has an effect on the feeling that the customer influenced others to buy organic products as well. It was also found that the motivation of customers to buy organic products was affected by the perceived impact of one's action and by the feeling that others were influence to buy organic products as well.

Perceived impact and the feeling that others are influenced by one's own action, to buy organic products as well, has not been studied thoroughly before. More research on this topic could give more knowledge in how the social environment influences people's thoughts, behaviour and motivation when performing an action, in this case buying organic products. This knowledge can be used by organizations to create a shopping environment in which motivation for buying organic products is boosted. It could for example make a difference if employees make more eye contact with the customers or when an atmosphere is created in which customers have more contact with each other. By stimulating people's motivation to buy organic products, the environmentally friendly food market will be supported (Hughner, McDonagh, Prothero, Shultz, & Stanton, 2007; Nandwani, 2016; Pearson, Henryks, & Moffitt, 2007).

References

Bartels, J., & Onwezen, M. C. (2014). Consumers' willingness to buy products with environmental and ethical claims: the roles of social representations and social identity. *International Journal of Consumer Studies*, *38*(1), 82-89.

Carr, P. B., & Walton, G. M. (2014). Cues of working together fuel intrinsic motivation. *Journal of Experimental Social Psychology*, *53*, 169-184.

Echterhoff, G., Higgins, E. T., Kopietz, R., & Groll, S. (2008). How communication goals determine when audience tuning biases memory. *Journal of Experimental Psychology: General*, *137*(1), 3.

Echterhoff, G., Higgins, E. T., & Levine, J. M. (2009). Shared reality: Experiencing commonality with others' inner states about the world. *Perspectives on Psychological Science*, *4*(5), 496-521.

Fishbach, A., Steinmetz, J., & Tu, Y. (2016). Motivation in a Social Context: Coordinating Personal and Shared Goal Pursuits With Others. *Advances in Motivation Science*, *3*, 35.

Hardin, C. D., & Higgins, E. T. (1996). Shared reality: How social verification makes the subjective objective. In R. M. Sorrentino & E. T. Higgins (Eds.), *Handbook of motivation and cognition. Handbook of motivation and cognition, Vol. 3. The interpersonal context* (pp. 28-84). New York, NY, US: Guilford Press.

Hughner, R. S., McDonagh, P., Prothero, A., Shultz, C. J., & Stanton, J. (2007). Who are organic food consumers? A compilation and review of why people purchase organic food. *Journal of consumer behaviour*, *6*(2-3), 94-110.

Isaac, J.D., Sansone, C., & Smith, J. I. (1999). Other people as a source of interest in an activity. *Journal of Experimental Social Psychology*, *35*, 239-265.

Kerr, N. L., Messé, L. A., Seok, D., Sambolec, E. J., Lount, R. B., & Park, E. S. (2007). Psychological mechanisms underlying the Köhler motivation gain. *Personality and Social Psychology Bulletin*, *33*(6), 828-841.

Keysar, B., & Barr, D. J. (2002). Self-anchoring in conversation: Why language users do not do what they "should". In T. Gilovich, D. W. Griffin, & D. Kahneman (Eds.), *Heuristics and biases: The psychology of intuitive judgment* (pp. 150-166). Cambridge, United Kingdom: Cambridge University Press.

Koo, M., & Fishbach, A. (2008). Dynamics of self-regulation: How (un) accomplished goal actions affect motivation. *Journal of personality and social psychology*, *94*(2), 183.

Nandwani, D. (Ed.). (2016). *Organic farming for sustainable agriculture* (Vol. 9). Springer.

Pearson, D., Henryks, J., & Jones, H. (2011). Organic food: What we know (and do not know)

about consumers. *Renewable Agriculture and Food Systems*, *26*(2), 171-177.

Pearson, D., Henryks, J., & Moffitt, E. (2007). What do buyers really want when they purchase organic foods. *Online Journal of Organic Systems*, *2*(1).

Reganold, J. P., & Wachter, J. M. (2016). Organic agriculture in the twenty-first century. *Nature Plants*, *2*, 15221.

Shteynberg, G., & Galinsky, A. D. (2011). Implicit coordination: Sharing goals with similar others intensifies goal pursuit. *Journal of Experimental Social Psychology*, *47*(6), 1291-1294.

Smith, E. R., & Mackie, D. M. (2016). Representation and incorporation of close others' responses: The RICOR model of social influence. *Personality and Social Psychology Review*, *20*(4), 311-331.

Steinmetz, J., & Pfattheicher, S. (2017). Beyond Social Facilitation: A Review of the Far-Reaching Effects of Social Attention. *Social Cognition*, *35*(5), 585-599.

Steinmetz, J., Xu, Q., Fishbach, A., & Zhang, Y. (2016). Being observed magnifies action. *Journal of personality and social psychology*, *111*(6), 852.

Tajfel, H., & Turner, J. C. (1979). An integrative theory of intergroup conflict. *The social psychology of intergroup relations*, *33*(47), 74.

Thøgersen, J. (1996). Recycling and morality: A critical review of the literature. *Environment and behavior*, *28*(4), 536-558.

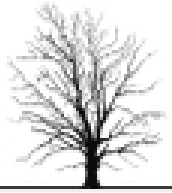
Touré-Tillery, M., & Fishbach, A. (2014). How to measure motivation: A guide for the experimental social psychologist. *Social and Personality Psychology Compass*, *8*(7), 328-341.

Touré-Tillery, M., & Fishbach, A. (2017). Too far to help: The effect of perceived distance on the expected impact and likelihood of charitable action. *Journal of personality and social psychology*, *112*(6), 860.

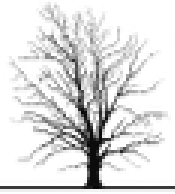
Van Boven, L., & Loewenstein, G. (2003). Social projection of transient drive states. *Personality and social psychology bulletin*, *29*(9), 1159-1168.

Zajonc, R. B. (1965). Social facilitation. *Science*, *149*, 269-274.

Appendix 1: Questionnaire front page (being observed condition)



Appendix 2: Questionnaire front page (not being observed condition)



Appendix 3: Questionnaire instructions and questions (the same for both conditions)

Het kopen van biologische producten

Vragenlijst

Het doel van dit onderzoek is om gedachten over het kopen van biologische producten in kaart te brengen. We willen u vragen om per stelling te beantwoorden hoe sterk deze overeenkomt met uw ideeën en gevoelens op dit moment. U kunt invullen wat als eerste in u opkomt.

De deelname aan dit onderzoek is volledig anoniem. U kunt op elk moment besluiten om uw deelname te beëindigen. De anonieme data worden mogelijk gedeeld met derden als dit nodig blijkt om het wetenschappelijk onderzoek op een juiste manier te voltooien.

Mocht u vragen hebben over dit onderzoek, dan kunt u contact opnemen met Ilse Jansen (e-mail: i.e.g.jansen@uu.nl).

Door deel te nemen aan dit onderzoek, geeft u toestemming om uw vragenlijst bij het onderzoek te betrekken.

---

*Om ons heen wordt op verschillende manieren aandacht besteed aan **duurzaamheid**. Steeds meer organisaties dragen bij aan een duurzamere maatschappij. Één manier om duurzaamheid om ons heen te steunen, is door bij de Ekoplaza boodschappen te doen. Vandaag onderzoeken we hoe mensen denken over het **kopen van biologische producten.***

Beoordeel in hoeverre de volgende vragen van toepassing zijn op jou, door het cijfer te omcirkelen.

(1 = helemaal niet, 9 = heel erg)

In hoeverre had je vandaag het idee dat het kopen van biologische producten een belangrijke bijdrage was voor de omgeving?

Helemaal niet 1--------2-------3--------4--------5--------6--------7--------8--------9 Heel erg

Heb je vandaag het gevoel gehad dat je een impact had op het behouden van de omgeving, door het kopen van biologische producten?

Helemaal niet 1--------2-------3--------4--------5--------6--------7--------8--------9 Heel erg

---

Heb je het gevoel dat je vandaag andere mensen hebt gemotiveerd om biologische producten te kopen, door zelf biologische inkopen te doen?

Helemaal niet 1--------2-------3--------4--------5--------6--------7--------8--------9 Heel erg

In hoeverre denk je vandaag anderen beïnvloed te hebben in het kopen van biologische producten?

Helemaal niet 1--------2-------3--------4--------5--------6--------7--------8--------9 Heel erg

Nu willen we je vragen hoe je over het algemeen denkt over het kopen van biologische producten.

Over het algemeen, in hoeverre vind je het belangrijk dat biologische producten worden gekocht?

Helemaal niet 1--------2-------3--------4--------5--------6--------7--------8--------9 Heel erg

Over het algemeen, in hoeverre heb je het gevoel dat het kopen van biologische producten bijdraagt aan het behouden van de omgeving?

Helemaal niet 1--------2-------3--------4--------5--------6--------7--------8--------9 Heel erg

Bij deze krijgt u nog een laatste vragen over vandaag.

In hoeverre voelde je je vandaag geobserveerd tijdens het kopen van biologische producten?

Helemaal niet 1--------2-------3--------4--------5--------6--------7--------8--------9 Heel erg

---

Beantwoord deze vragen over uzelf.

Wat is uw leeftijd?

… …

Wat is uw gender?

- Man
- Vrouw
- Iets anders

Wat is uw moedertaal?

- Nederlands
- Engels
- Anders

Heel erg bedankt voor uw deelname!

Appendix 4: Script

How to run the experiment

Preparation:

- Print 120 questionnaires.
- Print half of them with a tree logo on the top and the other half with the logo on the bottom of the front page. The top logo means that this participant is in the experimental condition (being observed) and the bottom logo the control condition (not being observed)

Before approaching a potential participant:

- Make sure you stand outside the organic supermarket at the exit, where you can watch them buying products through the window.
- See if they actually bought something organic. Don't approach them if they just looked around in the organic supermarket. Only ask people who paid for their groceries.
- Only approach one person at a time and let only one person at a time fill in the questionnaire. If people are with two, then only one can fill in the questionnaire. I tell the other that it is allowed to silently watch the other fill in the questionnaire.
- Only approach people when:
    - above 18 years old
    - without children
    - not distracted (f.e. by phone)
    - clear state of mind (not confused or dissociated)
    - not clearly in a rush
    - not deaf/blind
    - they don't know my experiment (some friends/family do)
    - they are with two people or alone

When approaching:

- Treat everybody with the same calm smile, also if I know someone personally. Don't chat, only react with empty friendly remarks like yes, indeed, I can imagine.
- Stay at a proper distance when asking to participate. I let them approach me.

This is what I say to every person:

- "Hi, via the university I'm doing a study on buying organic food. I have a questionnaire which only takes about 2-3 minutes. Would you be willing to take part?"

  "Hoi, vanuit de universiteit doe ik een kort onderzoek over het kopen van biologische producten. Ik heb een vragenlijst die maar 2-3 minuten duurt. Zou je mee willen doen?

- If no:
  - "Ok, have a nice day"
  - "Oke, fijne dag"
- If yes:
  - "Great. Here's the survey. It speaks for itself."
  - "Super. Hier is de vragenlijst. Het wijst zichzelf.
- If the survey shows the tree on the top, then I say:
  - "Oh by the way, I observed you while you were shopping organic products."
  - "Oh trouwens, ik heb je geobserveerd terwijl je biologische inkopen deed."

<u>During the study:</u>

- Exclude people (and write down on the questionnaire shortly what happened and write my name down, so I know it's my remark)
  - If someone gets distracted for longer than a minute during the manipulation or filling in the questionnaire
  - If I give a wrong instruction/manipulation
  - If something happened that could influence their answers in a bad way
- If people ask me about the observing, I say:
  - "I was just standing here, waiting to hand out my questionnaires."
  - "Ik stond hier gewoon te wachten tot ik de vragenlijst kon uitdelen."
- If people have any language questions and don't know words, try to explain. If they don't understand, they should leave the question blank.
  - Vb. Omgeving behouden: zorgen dat de natuur en omgeving wordt beschermd en lang in goede staat kan blijven bestaan.