

Counterfactuals, the National Economy, and Voting Choice

**Patrizia Catellani, Patrizia Milesi &
Augusta Isabella Alberici**

Current Psychology

A Journal for Diverse Perspectives on
Diverse Psychological Issues

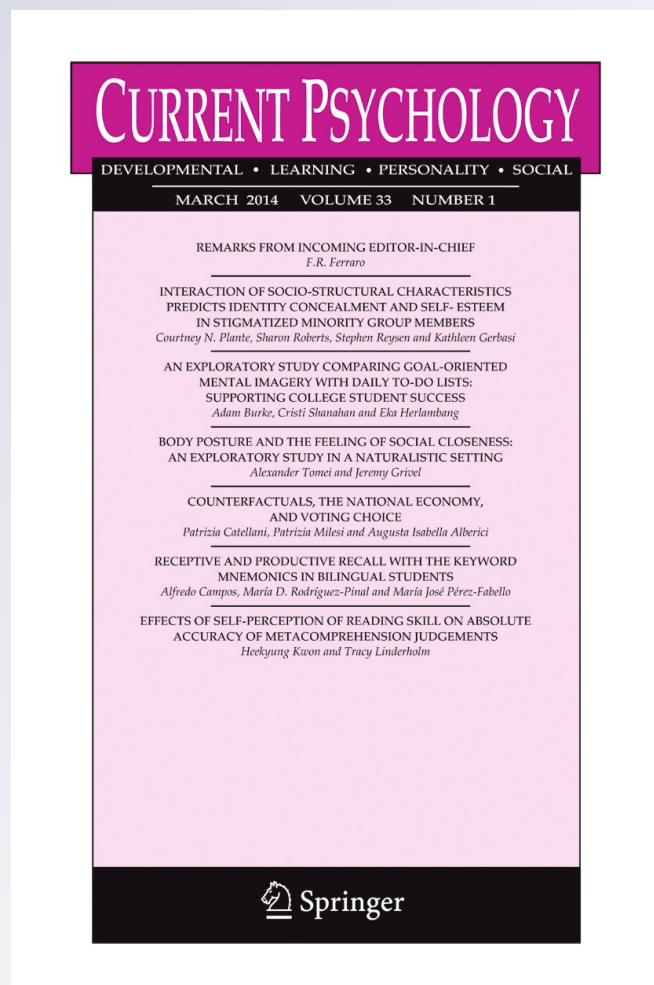
ISSN 1046-1310

Volume 33

Number 1

Curr Psychol (2014) 33:47-63

DOI 10.1007/s12144-013-9196-z



Your article is protected by copyright and all rights are held exclusively by Springer Science +Business Media New York. This e-offprint is for personal use only and shall not be self-archived in electronic repositories. If you wish to self-archive your article, please use the accepted manuscript version for posting on your own website. You may further deposit the accepted manuscript version in any repository, provided it is only made publicly available 12 months after official publication or later and provided acknowledgement is given to the original source of publication and a link is inserted to the published article on Springer's website. The link must be accompanied by the following text: "The final publication is available at link.springer.com".

Counterfactuals, the National Economy, and Voting Choice

Patrizia Catellani · Patrizia Milesi · Augusta Isabella Alberici

Published online: 5 December 2013
© Springer Science+Business Media New York 2013

Abstract Previous research has shown that counterfactual thinking (“if only...”) is related to event explanation, blame assignment, and future decisions. Using data from a large-scale electoral panel survey (ITANES), we investigated the association between pre-election counterfactual thoughts on the national economy and subsequent voting choice. Results revealed that voters focused counterfactuals on the government and other political or economic actors but also, and more frequently, on unspecified or reified actors. Whereas counterfactuals focused on the government were associated with voting for the challenger, counterfactuals focused on political or economic actors or on reified actors were associated with voting for the incumbent. These associations were even stronger when counterfactuals had a subtractive (“if only X had not...”) rather than an additive (“if only X had...”) structure. The inclusion of the targets of the counterfactuals added significantly to the predictive value of a model of voting choice based on voters’ evaluation of the national economy.

Keywords Counterfactual thinking · Voting choice · Economic voting · National economy

Suppose a person lives in a country whose economy has witnessed a significant decline, with negative consequences on everyone’s life. That person is likely to think about how the country has come to such a bad economic state, who is responsible for that, and whether a change in the government could improve the situation. He/she could have thoughts of the type: “The national economy would be better today, if only... *everybody had paid their taxes, ... the government had not wasted public money, ... young people had been given more opportunities*”. These are all examples of counterfactual thoughts, that is, thoughts in which an antecedent of a past event is postulated to have changed in order to hypothetically alter the outcome of the event (Kahneman and Tversky 1982; Roese 1997).

P. Catellani (✉) · P. Milesi · A. I. Alberici
Department of Psychology, Catholic University of Milan, Largo Gemelli 1, 20123 Milan, Italy
e-mail: patrizia.catellani@unicatt.it

People often generate counterfactuals in response to events with a negative outcome and counterfactuals are often related to attempts to explain events, assign blame, and make decisions about the future (e.g. Epstude and Roese 2008; Mandel et al. 2005). Usually, people focus counterfactuals on the aspects of the event that they perceive as deviating from a norm, either a routine norm or an expectation- or role-based norm, (Catellani and Covelli 2013; Catellani and Milesi 2005; Kahneman and Miller 1986). Thus, in the case of the examples reported above, the reference norm would be that *everyone should pay taxes*, that *the government should not waste public money*, and that *young people should be given more opportunities*. By providing a hypothetical scenario in which the negative outcome would not have happened if only the abnormal behavior or condition had not been extant, counterfactuals highlight perceived potential preventors of the negative outcome (Mandel 2003). Although such a reasoning process may overlook the “true” causal antecedents of the negative outcome (which are often remote and interconnected) in favor of an emphasis on who or what could have prevented it, it provides people with “a mentally available solution” for a disappointing outcome. Studies carried out in judicial and organizational contexts have shown that counterfactuals suggest who or what may be blamed for the negative outcome and influence sanction decisions (e.g. Branscombe et al. 1996; Morris and Moore 2000). When people generate counterfactuals about the negative trend of the economy of their country, these counterfactuals are likely to affect the explanation of how the country has come to such a bad economic state. If counterfactuals are generated when people are about to cast their vote at general elections, these thoughts may also be related to their voting decision.

In the current research we included—for the first time as far as we know—a counterfactual completion task (“The national economy would be better today, if only...”) as part of a large-scale electoral survey (ITANES¹). Our research was based on the assumption that counterfactual thinking is one of the basic mental processes that people engage in when they think about complex issues, such as the national economy. We expected to find a link between the characteristics of the counterfactuals that were generated and voting choice. We also expected that counterfactuals would add significantly to the predictive value of a model of voting choice based on the voters’ evaluation of the national economy. Such results would extend what is already known about the consequences of counterfactual thinking by showing that it can also influence voting decisions. They would also contribute to a better understanding of the psychological processes involved in the relation between the national economy and voting behavior.

Economic Voting

In industrialised democracies, voting choice has often been explained in the context of the national economy. According to the “economic voting hypothesis” (e.g. Lewis-Beck and Paldam 2000; Lewis-Beck and Stegmaier 2007), voters are likely to hold the

¹ The survey was carried out as part of the ITANES (ITALian National Election Studies) programme. ITANES has been systematically analysing voting choice in Italy since the beginning of the 1990s. Readers interested in this research program may visit the website www.itanes.org.

government responsible for the economy of their country, and to reward or punish the government accordingly with their vote. This suggests that during times of economic growth, voters reward the government by voting for it, whereas during times of economic decline, voters punish the government by voting for the challenging party. However, both tendencies are subject to great variation across different countries and different elections (Lewis-Beck 2006).

The attribution of responsibility is of central importance in the dynamics of economic voting (Hulsizer et al. 2004; Sahar 2008). Some studies have suggested that a positive or negative perception of national economy influences voting choice only when voters consider the incumbent responsible for the state of the national economy (Arcenaux 2003; Lau and Sears 1981; Lewis-Beck and Stegmaier 2000). The more the government is held responsible for a thriving economy, the greater is the desire to reward the government. Conversely, the more the government is held responsible for economic decline, the stronger is the desire to punish the government. The latter relationship is likely to be stronger than the former. In the case of a national economy that has deteriorated, voters who blame the government for this deterioration would be much more inclined to vote against the government than voters who blame someone or something else.

Researchers investigating the link between the attribution of responsibility for the state of the national economy and voting choice have typically asked voters to state whether they deemed the government to be responsible for the state of the national economy (e.g. Arcenaux 2003; Marsh and Tilley 2010). In a limited number of studies, people were asked to indicate who they deemed most responsible when presented with a list of political and social actors. For example, Rudolph and Grant (2002; see also Rudolph 2003) analysed responses to a question included in the American National Election Study (ANES) 2000. In this study people were asked to evaluate the condition of the national economy comparing it with the condition of the previous year (“better”, “stayed about the same”, “worse”) and to select who they felt was most responsible for the condition of the national economy out of a choice of four alternatives: the President, the Congress, the Federal Reserve, or business people. Results showed that there was considerable heterogeneity in voters’ attributions of responsibility for the state of the national economy: 37.5 % of participants attributed responsibility to business people, 24.6 % to the President, 19.0 % to the Congress and 19.0 % to the Federal Reserve. Further analyses showed that the evaluations of the national economy influenced voting choice only when the state of the economy was attributed to the President. On the contrary, economic evaluations were inconsequential for voting choice when the state of the national economy was attributed to actors other than the President.

One of the aims of the present research was to investigate what happens when voters have the chance to attribute the state of the national economy to political and social actors that they select spontaneously, not choosing from a preselected list. Participants were required to complete an “if only...” counterfactual stem, and were therefore able to focus on any protagonist involved in the national economy that came to their mind. We asked people to generate counterfactuals moving from the assumption that an in-depth investigation of the mental processes that lead voters to attribute responsibilities for the decline of the national economy is needed. As it is often the case when dealing with complex problems (see Paldam and Nannestad 2000; Savadori et al. 2001), people who reflect on a deteriorated national economy in view of an upcoming general

election are likely to engage in simplified mental processes, and these processes lead them to decide whether the incumbent government or other actors are responsible for the economic decline. We argue that counterfactuals are among the outcomes of these simplified, schematic processes (Teigen et al. 2011). Moreover, given their associations with the attribution of blame and responsibility, they may play an important role in the decisions of voters.

Counterfactual Thinking

Counterfactual thinking entails a mental simulation in which an antecedent of a real outcome is mentally undone (e.g. “If only the government had not wasted public money,...”) so that a different outcome is postulated (“...the national economy would be better today”) (Roese 1997). In experimental studies on counterfactual thinking, people are often presented with a vignette or a short story with a negative outcome and they are invited to imagine how things might have been better by completing “if only ...” stems. The antecedents on which counterfactuals are focused are perceived to be sufficient to undo the actual outcome; in other words, these antecedents are perceived to be preventative or inhibitory factors (Hilton et al. 2005; Mandel 2003). For example, after an earthquake with heavy damages to buildings and loss of human lives one could think that things might have been better if only anti-seismic building techniques had been used and a quicker and more efficient warning system had been implemented. Accordingly, in everyday life counterfactuals do not contribute as much to a deep comprehension of the links between cause and effect as they contribute to a more pragmatic comprehension of how an event (especially a negative event) developed in the past and might be prevented from happening again (McEleney and Byrne 2006).

Research in various domains has demonstrated that the evocation of counterfactuals has important cognitive, emotional, and behavioral consequences (e.g. Bertolotti et al. 2013; Catellani 2011; Mandel et al. 2005; Markman et al. 2009). The attribution of blame and responsibility are among these consequences. The counterfactual *target*, that is, the actor upon whom the counterfactual antecedent is focused (e.g. “If only *the government...*”), is more likely to be held responsible for the real outcome than the other actors who were also involved in the outcome (Wells and Gavanski 1989). This is especially apparent when the behaviour of this target has been negligent, reckless, or socially undesirable (Alicke et al. 2008). This can have important consequences. For example, in simulated rape cases, the jurors who are more likely to focus counterfactuals on the victim than on the perpetrator (e.g. “If only the woman had not provoked the man, the rape would not have happened”) are also more inclined to blame the victim and to diminish the responsibility of the perpetrator (Branscombe et al. 1996; Catellani et al. 2004; Nario-Redmond and Branscombe 1996). In view of this demonstrated link between the target on which counterfactuals are focused and the attribution of blame, an analysis of the targets of counterfactuals that refer to the national economy is especially important. These targets are likely to be related to blame for the bad condition of the economy, and therefore also to voting choice.

In order to study the links between counterfactuals and voting choice, it is important to take into account not only the target, but also the *structure* of the counterfactuals. A counterfactual has a *subtractive structure* when the hypothetical scenario removes an

element that was present in the real scenario (e.g. “If only the government *had not waylaid public money*, things would have been better”). A counterfactual has an *additive structure* when an antecedent is added in the hypothetical scenario that was not present in the real scenario (e.g. “If only the government *had taken harsher measures*, things would have been better”) (Dunning and Parpal 1989; Roese and Olson 1995). In other words, while a subtractive counterfactual focuses on the deletion of something that was done, an additive counterfactual focuses on the addition of something that was not, in fact, done.

Subtractive and additive counterfactuals are based on two different cognitive processing styles (e.g. Kray et al. 2006; Markman et al. 2007). The generation of subtractive counterfactuals promotes a relational processing style that enhances the tendency to consider interconnections and associations between elements of a scenario, and facilitates performance on analytical problem solving tasks (Wong et al. 2009; Kray et al. 2006). Consistently, subtractive counterfactuals are more likely to be used in prevention-oriented situations, where people are stimulated to identify the causes of a past event to prevent the event from happening again (e.g. sexual assault; Catellani and Milesi 2001; Zeelenberg et al. 1998). Through their close inspection of the past scenarios, subtractive counterfactuals also induce to focus attention on the past mistakes of the actors involved in the real event, and thus provide a basis to evaluate the performance of those actors (Kray et al. 2006; Markman et al. 2007; Turley et al. 1995). Additive counterfactuals, consisting in the construction of alternative antecedents that were not part of the factual event, promote an expansive processing style that broadens conceptual attention and facilitates performance on creative generation tasks (Wong et al. 2009). Additive counterfactuals tend to prevail where reflection on the past is guided by an incentive to prepare for the future (e.g. Grieve et al. 1999; Roese and Olson 1993; Turley et al. 1995) because they broaden attention beyond what happened in reality and explore new and multiple possibilities.

In the current research, we expected that counterfactual structure would play a moderating role in the link between counterfactual target and voting choice. Given their capacity to focus attention on the past mistakes of actors involved in a real event, we expected that subtractive counterfactuals that were focused on specified targets would be more related to voting choice than additive counterfactuals focused on those same targets.

The Present Research

In order to investigate the counterfactuals that voters generate when they consider the national economy and whether these counterfactuals are associated with voting choice, we included a counterfactual completion task in a large-scale electoral panel survey (ITANES). The pre-election questionnaire requested that participants generate a counterfactual by completing the following statement: “The national economy would be better today, if only...” The same participants were given a post-election questionnaire that included a question that asked who they had voted for.

The first goal of our research was to assess the kind of targets on which voters would focus spontaneously when they generated counterfactuals about a deteriorated national economy. As discussed above, the economy is a complex issue in which many actors are involved, and there are many types of targets on which counterfactuals may focus.

We expected voters to focus counterfactuals on an easily identifiable actor, such as “the government” or other political and economic actors that for various reasons would be perceived as salient, for example “the opposition parties”, “the bankers”, or “the unions”. However, we also realised that it was possible for voters to focus counterfactuals on vague, unspecified targets (such as “they” or “people”), or even on fully depersonalised targets (such as “9/11” or “the Euro”). We defined these targets as *reified* targets. Reification is a transformation process through which verbs, which specify processes and actions (e.g. “terrorists are threatening us”), are used as nouns, which construe objects and entities (e.g. “the terroristic threat”; Dunmire 2005, p. 490; see also Kress 1995). The reification process may increase the salience and visibility of a given phenomenon, while at the same time reducing the possibility of clearly tracing that phenomenon back to specified actors that may be deemed responsible for it.

In addition to an investigation of the types of target that most frequently become the focus of the counterfactuals generated by voters, we also aimed to assess whether the targets of counterfactuals might be associated with voting choice. As discussed above, counterfactual targets are more likely to have blame assigned to them for the event referenced in the counterfactual than other actors also involved in the event. When counterfactuals are focused on the national economy, the choice of the counterfactual target could be related to a process of assigning blame for the negative condition of the economy and therefore also to voting choice.

We formulated an hypothesis (Hypothesis 1) on the relation between counterfactual target and vote, and articulated it in three sub-hypotheses. First of all, we expected that those who voted for the challenging coalition would focus more counterfactuals on the government than those who voted for the incumbent coalition (Hypothesis 1a). This result would be consistent with previous research (e.g. Arcenaux 2003; Marsh and Tilley 2010), which suggests that when the government is blamed for a declining national economy, this increases support for the challenger. For the first time, however, we would show that counterfactuals focused on the government are associated with vote for the challenger. Conversely, we expected voters for the incumbent coalition to focus more counterfactuals on other political or economic actors (i.e. other than the government) than voters for the challenging coalition would do (Hypothesis 1b). This would happen because a focus on other actors is one way of taking the blame for the declining economy away from the government. Once again, we would show for the first time the association between this type of counterfactuals and vote for the incumbent. Finally, we expected voters for the incumbent coalition to focus more counterfactuals on reified actors than voters for the challenging coalition would do (Hypothesis 1c). This would be consistent with the assumption, discussed above, that focus on reified targets could lead to less responsibility being attributed to the government, making it more difficult to attribute responsibility to specific factors that contributed to the deterioration of the national economy. Overall, a confirmation of Hypothesis 1 would enlarge our knowledge of the reasoning processes underlying economic voting by showing that the targets focused on in counterfactuals about the national economy are associated with either vote for the incumbent or vote for the challenger.

We developed a second hypothesis regarding the moderating role of counterfactual structure (subtractive vs. additive) on the association between counterfactual target and voting choice. As discussed above, by removing one or more elements that were present in the real scenario (e.g. “If the government *had not* done X...”) subtractive counterfactuals imply a close consideration of the past mistakes of actors. This is less likely to be

the case for additive counterfactuals, which add new elements that were not present in the real event (e.g. “If the government *had* done X...”). Therefore, we expected that, in the case of counterfactuals focused on specified and animate actors, subtractive counterfactuals would be more associated with voting choice than additive counterfactuals (Hypothesis 2). More specifically, we expected that the association between counterfactuals focused on the government and an expressed intention to vote for the challenging coalition (see Hypothesis 1a above) would be enhanced when counterfactuals had a subtractive rather than an additive structure (Hypothesis 2a). Similarly, we expected that the association between counterfactuals focused on political or economic actors and voting for the incumbent coalition (see Hypothesis 1b above) would be enhanced when counterfactuals had a subtractive rather than an additive structure (Hypothesis 2b).

If confirmed, Hypothesis 2 would contribute to deepen our knowledge about the different consequences of additive versus subtractive counterfactuals. Although earlier research claimed that subtractive counterfactuals have greater consequences for blame assignment and responsibility attribution (e.g. Kahneman and Miller 1986), subsequent researches carried out in various domains have proposed a more nuanced view of the attributional consequences of additive versus subtractive counterfactuals (e.g. N’gbala and Branscombe 1997). Our expectation was that in a context of performance evaluation, such as that of voting choice in favor of either the incumbent or the challenger, subtractive counterfactuals would be more consequential for subsequent decision than additive counterfactuals because they are constrained to a pragmatic evaluation of what has been done by the involved actors and did not work.

A final hypothesis of our research regarded our expectation that the inclusion of the targets of counterfactuals in a model of voting choice based on voters’ evaluation of the national economy would significantly add to this model (Hypothesis 3). A confirmation of this hypothesis would justify investigation of economic voting choice to consider not only voters’ evaluation of positive or negative changes in the national economy (as in “classical” research on economic voting) but also the way that voters attribute responsibility for these changes. More specifically, a confirmation of this hypothesis would contribute to the knowledge of the psychological processes underlying economic voting by showing the importance of the role played by counterfactuals in the dynamics of voting choices related to negative economic conditions. Results consistent with this hypothesis would suggest that economic evaluations tell only a part of the story about voting behavior. How people reason about who might have prevented a worsening in the economy adds a significant contribution to understand the psychological processes that may lead voters to support the government even in times of economic decline.

Method

Participants

A sample of 712 voters participated in the present study. They were included in the 2006 ITANES general elections programme². The ITANES uses random probability

² Survey data used in our research (and data from other surveys) can be downloaded from the ITANES website www.itanes.org.

sampling techniques to select respondents, and thereby creates a representative sample of eligible voters in Italy. Between mid-February and mid-March, participants took part in a pre-election face-to-face questionnaire. General elections then took place on April 9. Following the elections (between mid-May and mid-June), 1,377 (68.7 %) of the original respondents participated in a post-election face-to-face questionnaire. Among participants who responded to both questionnaires, 1,082 (78.6 %) had completed the counterfactual task in the pre-election questionnaire appropriately (that is, with a sentence including at least a subject and a verb). Within this subsample, the 712 individuals (65.8 %) who had also indicated who they had voted for in the post-election questionnaire were included in the final sample.

Materials and Procedure

Counterfactual Completion Task In the pre-election questionnaire, participants were invited to complete a counterfactual thinking task by answering the following question: “Could you please complete the following sentence with the first thought that comes to your mind?” “The national economy would be better today, if only...”. Participants could complete only one counterfactual stem.

Evaluation of the Government's Performance on the National Economy In the pre-election questionnaire, participants were asked to evaluate the government's performance on the national economy on a 4-point scale, ranging from 1 (“very negative”) to 4 (“very positive”).

Evaluation of the National Economy Again, in the pre-election questionnaire, participants were asked to indicate whether the Italian national economy had deteriorated or improved during the previous year. They answered on a 5-point scale, ranging from 1 (“very much deteriorated”) to 5 (“very much improved”).

Voting Choice In the post-election questionnaire, participants were asked which party they had voted for in the general election that had recently taken place. Replies were grouped according to vote for a party of either the incumbent centre-right coalition ($n=319$) or the challenging centre-left coalition ($n=393$).

Coding Counterfactuals

All counterfactuals generated were coded according to their target and their structure.

Counterfactual Target The counterfactual target is the subject of the hypothetical antecedent generated upon completion of the counterfactual stem “if only...”. A preliminary analysis of a sub-sample of one hundred responses led to the creation of four main categories of counterfactual targets.

- (1) **Government.** This category included counterfactuals focused on the government. For example: “... if only the government had not wasted public money”, “... if only the government had taken care of the needs of the average family”, “... if

- only the government had kept its promises”, “... if only the government had considered what is good for the country”, “... if only the government had not passed laws in favour of the Prime Minister’s personal interests”.
- (2) **Political/economic actor.** This category included counterfactuals focused on a specified political or economic actor other than the government. For example: “... if only Italian firms had not opened branches abroad”, “... if only the ruling class had been wiser”, “... if only trade unions had been more cooperative”, “... if only opposition parties had not stood in the way of the government’s activity”, “... if only economists had been more competent”, “... if only large numbers of immigrants had not entered our country”.
 - (3) **Unspecified actor.** Counterfactuals focused on vague or indefinite targets, such as “people” and the pronouns “one” or “they”, were included in this category. Hypothetical antecedents formulated in the passive form were also coded in this way. Examples include the following: “... if only all people had paid taxes”, “... if only there had not been so many corrupt people around”, “... if only there had not been so many people who scrounge off honest citizens”, “if only more attention had been given to investments”, “... if only prices had been kept under control”.
 - (4) **Reified actor.** Counterfactuals focused on a depersonalised, reified target were included in this category (Dunmire 2005). Whereas the other target categories referred to an animate agent who did or did not do something, this target category regarded “something” that had or had not happened. For example: “... if only the cost of living had been kept proportionate to wages”, “... if only the change from the Lira to the Euro had been more favourable to us”, “... if only the purchasing power of the middle class had been stronger”, “if only there had not been the Euro”, “... if only there had not been September 11”, “... if only Asian products had not invaded our market”.

Two independent coders rated all counterfactual targets according to the above list. Between-coder agreement was 85 %, and discrepancies were solved through discussion.

Counterfactual Structure The second coding criterion for counterfactuals referred to the additive or subtractive structure of their hypothetical antecedent.

- (1) **Subtractive structure.** Counterfactuals were coded as having a subtractive structure when their hypothetical antecedent removed one of the features of the real scenario. For example: “... if only oil cost *had not* increased so much”, “... if only there *had not* been a centre-right government”, “... if only there *had not* been the Iraqi war”.
- (2) **Additive structure.** This coding category was used when the hypothetical antecedent of the counterfactual was not already present in the real scenario and was therefore “added” to the hypothetical scenario. For example: “... if only the government *had* worked harder on employment policies”, “... if only the country’s collective interests *had* been taken into closer consideration”, “... if only we *had* adopted a better policy of price control”.

As in the case of counterfactual targets, two coders rated counterfactual structure independently, with an inter-coder agreement of 92 %. Disagreements were resolved through discussion.

Results

Preliminary Analysis

As discussed above, our research was driven by the assumption that the target on which counterfactuals are focused is related to the assignment of blame for the outcome (i.e. the deteriorated conditions of the national economy). The ITANES survey employed in our research included a “classical” question of research on economic voting, which required that participants evaluate the government’s performance regarding the national economy (see above). We therefore carried out a preliminary analysis to assess whether the targets of counterfactuals were associated with this evaluation. An analysis of variance (ANOVA) on the evaluation of the government’s performance regarding the national economy yielded significant variation among voters who focused counterfactuals on different targets, $F(3, 709)=27.94, p<0.001$. A post hoc Tukey test showed that voters who focused counterfactuals on the government also gave the worst evaluation of the government’s performance ($M=1.53, SD=0.68$), whereas the best evaluation of the government’s performance was expressed by voters who focused counterfactuals on other political/economic actors ($M=2.10, SD=0.78$) or on a reified target ($M=2.24; SD=0.74$). The assessments of voters who focused counterfactuals on an unspecified actor lay between these extremes ($M=1.96, SD=0.76$). As expected, counterfactuals that focused on the government were therefore associated with a worse evaluation of the government’s performance than counterfactuals focused on other targets. These results extend what has emerged for counterfactuals in non-political domains to counterfactuals about the national economy, namely that after a negative event the generation of counterfactuals focused on a given target is associated with a negative evaluation of that target. Moreover, these results clearly show that counterfactuals are among the psychological processes involved when voters evaluate the government’s economic performance.

Hierarchical Log-Linear Analysis

The main goal of our research was to analyse the relative frequency of the four counterfactual target categories, as well as their relation to counterfactual structure and voting choice. We therefore performed a hierarchical log-linear analysis with the following design: Counterfactual Target (four levels: government, political/economic actor, unspecified actor, reified actor) \times Counterfactual Structure (two levels: additive, subtractive) \times Vote (two levels: incumbent coalition, challenging coalition).

First of all, the results of the tests of significance (partial association chi-square tests) revealed a main effect of Counterfactual Target, $\chi^2(3, N=712)=129.08, p<0.001$. The most frequent target on which the counterfactuals focused was the unspecified actor (41.9 %), followed by the reified actor (25.9 %), the government (19.2 %), and the political/economic actor (12.9 %). Therefore, faced with the task of completing a counterfactual stem on how the national economy could be better, voters focused counterfactuals on unspecified and reified actors much more frequently than on the government or other political/economic actors.

Counterfactual Structure also had a main effect, $\chi^2(1, N=712)=28.33, p<0.001$, with additive counterfactuals prevailing (59.9 %) over subtractive ones (40.1 %). The

main effect of Counterfactual Structure was qualified by a significant Target \times Structure interaction, $\chi^2(3, N=712)=173.18, p<0.001$. The additive structure prevailed over the subtractive structure when the focus was on unspecified actors (78.6 % vs. 21.4 %, $\chi^2(1)=124.15, p=0.001$), on the government (75.2 % vs. 24.8 %; $\chi^2(1)=38.51, p<0.001$), and on other political/economic actors (57.6 % vs. 42.4 %; $\chi^2(1)=3.31, p=0.06$). However, the prevalence was dramatically reversed in the case of reified actors. Counterfactuals focused on this latter target were more likely to have a subtractive structure than an additive structure (19.5 % vs. 80.5 %; $\chi^2(1)=83.04, p<0.001$). Thus, only when the counterfactuals generated by citizens focused on a reified, depersonalised actor, they were also more likely to focus on something that existed or happened in reality but was hypothetically subtracted in the counterfactual (e.g. “If only 9/11 *had not* happened...”). These data suggest that when counterfactuals are focused on reified actors, it is easier to mentally delete a real antecedent (subtractive counterfactual) than to add an antecedent that was not present in reality (additive counterfactual). Evidently, people are more likely to mentally undo the actual performance of a reified actor than to speculate about purely hypothetical performances of the same actor.

A significant interaction between Counterfactual Target and Vote also emerged from the analysis, $\chi^2(3, N=712)=42.90, p<0.001$. As shown in Fig. 1, counterfactuals focused on the government were much more frequently associated with voting for the challenging coalition than voting for the incumbent coalition (77.4 % vs. 22.6 %), $\chi^2(1)=33.17, p<0.001$. In contrast, counterfactuals focused on a political or economic actor were more frequently associated with voting for the incumbent coalition than voting for the challenging coalition (58.2 % vs. 41.8 %), $\chi^2(1)=8.35, p=0.01$. The counterfactual focus on a reified actor was also much more frequently associated with a vote for the incumbent coalition (61.1 % vs. 38.9 %), $\chi^2(1)=22.28, p<0.001$, whereas the counterfactual focus on an unspecified target showed only a tendency to be associated with voting choice (vote for the challenging coalition 59.4 % vs. vote for the incumbent coalition 40.6 %), $\chi^2(1)=2.75, p=0.09$.

These results fully supported our Hypotheses 1a, 1b, and 1c, regarding the relationship between the target focused on in the counterfactuals and vote. Whereas those who voted for the challenging coalition focused counterfactuals more frequently on the government (e.g. “... if only the *government* had not allowed companies to move production abroad”, “... if only the *government* had kept its promises”), those who

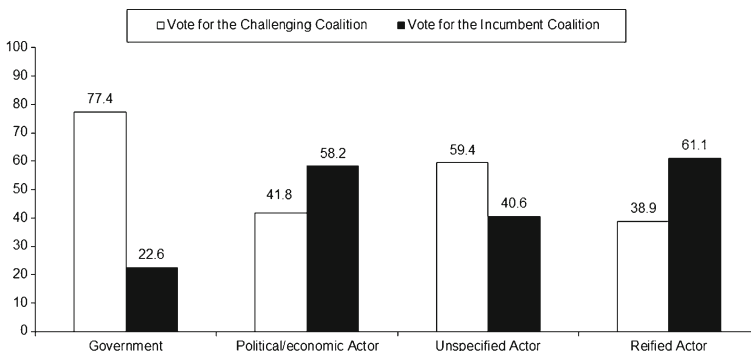


Fig. 1 Counterfactual target as a function of voting choice

voted for the incumbent coalition focused counterfactuals more frequently on other political or economic actors (e.g. "... if only *opposition parties* had not stood in the way of the government"), as well as on reified actors (e.g. "... if only there had not been *the Euro*"). In the latter case, the difference between the voters of the two counterparts was especially marked. Evidently, a counterfactual focus on highly visible and vivid entities functioned especially well in taking the blame for a deteriorating economy away from the government. Our results confirmed the prevailing counterfactual focus on the government by people voting for the challenger (Hypothesis 1a) and the prevailing counterfactual focus on other actors by people voting for the incumbent (Hypothesis 1b). As such they are consistent with what emerged in previous studies (Rudolph 2003; Rudolph and Grant 2002) regarding which actors are identified as most responsible for the condition of the national economy. In our study, however, these actors were not just chosen from a preselected list but were observed as targets of spontaneous counterfactuals. Moreover, reified actors emerged as a further category of actors chosen as targets of counterfactuals, in particular by voters for the incumbent (Hypothesis 1c). The category of reified actors therefore appears to be another important category of actors that was not considered by previous research on counterfactual thinking or on economic voting, but that is often mentioned by voters.

The second hypothesis of our research regarded the moderating role of counterfactual structure in the relationship between counterfactual target and voting choice. Backward elimination without the three-way effect Counterfactual Target \times Counterfactual Structure \times Vote indicated that a reduced model differed significantly from the full model, $L.R. \chi^2(3, N=712)=16.72, p<0.001$. Therefore, the three-way interaction was required to explain the data. Analysis of the Counterfactual Structure \times Vote interaction separated by target revealed that the interaction was significant when counterfactuals were focused on the government, $\chi^2(1)=4.26, p<0.05$, and on political/economic actors, $\chi^2(1)=11.50, p=0.001$. However, the two-way interaction was not significant when counterfactuals were focused on unspecified actors, $\chi^2(1)=2.98, p=0.08$, or on reified actors, $\chi^2(1)=0.15, p=0.70$.

Turning first to counterfactuals focused on the government, the analysis revealed that the strong association described above between counterfactuals focused on the government and voting for the challenger was enhanced when counterfactuals had a subtractive structure, that is, when counterfactuals removed government's past behaviours (vote for the challenger 90.9 % vs. vote for the incumbent 9.1 %), $\chi^2(1)=19.74, p<0.001$. In terms of counterfactuals focused on political or economic actors, the analysis showed that the strong association discussed above between these counterfactuals and voting for the incumbent was also further enhanced when counterfactuals were subtractive, that is, when counterfactuals removed political or economic actors' past actions (vote for the incumbent 78.9 % vs. vote for the challenger 21.1 %), $\chi^2(1)=19.61, p<0.001$. Thus, in both cases participants focused on what was done by the two targets and did not work and this had consistent consequences in terms of their subsequent voting choice.

These results supported our Hypothesis 2 according to which, in the case of counterfactuals focused on specified and animate actors, counterfactual structure would moderate the relation between counterfactual target and vote. As expected, subtractive counterfactuals focused on the government were more associated with voting for the challenger than the corresponding additive counterfactuals (Hypothesis 2a). In turn,

subtractive counterfactuals focused on other political or economic actors were more associated with voting for the incumbent than the corresponding additive counterfactuals (Hypothesis 2b). Evidently, when voters mentally revise a past action of the government or another political or economic actor and focus their attention on the *errors* of the actor and how they could have been avoided (as is the case in *subtractive* counterfactuals, e.g. "... if only the government *had not* wasted our money", "... if only Italian firms *had not* opened branches abroad"), these thoughts are strongly connected with vote. The same does not happen in the case of *additive* counterfactuals, which instead consist of voters' conjectures about what the same actors could have done.

Hierarchical Logistic Regression Analysis

A final goal of our research was to assess whether the inclusion of the targets of the counterfactuals in a "classical" model of voting choice based on the participants' evaluation of the national economy would add significantly to this model. We performed a hierarchical logistic regression of respondents' voting choice, with their evaluations of the national economy and counterfactual targets as predictors of voting choice. In Step 1, voting choice (1 = voting for the incumbent coalition; 0 = voting for the challenging coalition) was regressed on participants' evaluations of the national economy, with higher scores corresponding to a more positive evaluation of national economy. In Step 2, the counterfactual target was entered as a four-level dummy variable, with those counterfactuals that were focused on an unspecified actor as the reference condition.

As can be seen in Table 1, participants' evaluations of the national economy improved the predictive power of the model ($\Delta\chi^2(1df)=93.30$, $p<0.001$, with Nagelkerke $R^2=.17$), with a better evaluation of the national economy predicting a vote for the incumbent coalition ($B=0.86$, $SE=0.09$, $p<0.001$). Entering counterfactual targets in Step 2 significantly added to the predictive power of the model ($\Delta\chi^2(3df)=38.01$, $p<0.001$, with Nagelkerke $R^2=.23$). Counterfactuals focused on the government predicted a vote for the challenging coalition ($B=-0.78$, $SE=0.25$; $p<0.01$), whereas

Table 1 Hierarchical logistic regression of voting choice on evaluation of national economy and on counterfactuals

	B	SE
Step 1		
Evaluation of national economy	0.86***	0.09
$\Delta\chi^2(df)$, p	93.30 (1), $p<.001$	
Nagelkerke R^2	0.17	
Step 2		
Evaluation of national economy	0.79***	0.09
Counterfactual target		
Government	-0.78**	0.25
Political/economic actor	0.50*	0.26
Reified actor	0.73***	0.20
$\Delta\chi^2(df)$, p	38.01 (3), $p<.001$	
Nagelkerke R^2	0.23	
Reference condition: counterfactuals focused on unspecified actor. Vote: 1 = vote for the incumbent coalition; 0 = vote for the challenging coalition		

* $p<.05$, ** $p<.01$, *** $p<.001$

counterfactuals focused on a political or economic actor ($B=0.50$, $SE=0.26$, $p=0.05$) or on a reified actor ($B=0.73$, $SE=0.20$, $p<0.001$) predicted a vote for the incumbent coalition. When the same regression analysis was carried out including only subtractive counterfactuals, the increment of the explained variance in Step 2 was even higher (Step 1: $\Delta\chi^2(1df)=50.22$, $p<0.001$, with Nagelkerke $R^2=.22$; Step 2: $\Delta\chi^2(3df)=26.90$, $p<0.001$, with Nagelkerke $R^2=.32$).

These results were fully consistent with our Hypothesis 3, which predicted that the inclusion of counterfactual targets would add explanatory power to a “classical” model of voting choice based on evaluation of the national economy.

Discussion

The results of this research show how people employ counterfactual thinking when reflecting on the national economy and how the target and the structure of the counterfactuals they employ are associated with their voting choice. For the first time, to our knowledge, an “if only...” completion task was included in a large-scale electoral panel survey. Data analysis revealed that voters spontaneously focus counterfactuals that refer to the national economy on the government and other specified political or economic actors but also, and even more frequently, on unspecified or reified actors. Whereas counterfactuals focused on the government are positively related with voting for the challenging coalition, counterfactuals focused on other political or economic actors or on reified actors are positively related with voting for the incumbent coalition. Counterfactuals focused on unspecified actors (e.g. “they” or “people”) are instead not clearly associated with voting choice. Although they are very frequent, these generic counterfactuals apparently do not contribute to shaping voting choice.

Our analysis also showed that the counterfactual structure moderates the association between counterfactual target and voting choice. Subtractive counterfactuals focused on the government or political/economic actors (e.g. “if only *X had not...*”) are more related with voting than additive counterfactuals focused on the same targets (e.g. “if only *X had...*”). When they are focused on political actors, subtractive counterfactuals possibly enhance the perception of the actors’ mistakes by stressing what the actors should not have done (Kray et al. 2006). Such a perception is likely to be related with subsequent voting choice.

These results are consistent with previous research that showed that the target and structure of counterfactuals are significantly related with attempts to explain past events and make future decisions (Epstude and Roese 2008; Mandel et al. 2005). As discussed in the introduction, previous research has shown that in judicial and organizational contexts counterfactuals focused on a given target affect the evaluation of the target and related behaviors (e.g. Branscombe et al. 1996; Catellani et al. 2004; Morris and Moore 2000). We have shown that also in the political domain counterfactuals focused on a given target are associated with related evaluations and behaviors, specifically with voting behavior. As to counterfactual structure, we have shown that the association between *subtractive* counterfactuals focused on given targets and vote for a given party is strong, while the association is less strong for *additive* counterfactuals focused on the same targets. This result adds to counterfactual literature by showing that, in a context

of performance evaluation, subtractive counterfactuals can be more consequential for subsequent decision than additive counterfactuals. This probably happens because subtractive counterfactuals are focused on committed actions that led to a negative outcome, while additive counterfactuals are free speculations about what the involved actors could have done but did not. Probably for the same reason, when counterfactuals are focused on reified actors, they are more likely to have a subtractive rather than an additive structure. Mentally undoing the performance of a reified actor is evidently easier than speculating about purely hypothetical performances of the same actor.

The results of our research also throw light on the controversial link between national economy and voting choice. In particular, they contribute to our understanding of why voters may exonerate the incumbent from blame for economic decline and vote for the incumbent in new elections. In our research, those who voted for the incumbent coalition were especially likely to focus counterfactuals on reified actors. Employing this kind of counterfactuals evidently allowed voters not to blame the incumbent government for the economic decline. In most cases, these reified actors were exceptional and vivid (e.g. the introduction of the Euro, or the 9/11 terrorist attacks) and were therefore easy for voters to call to mind. If voters easily recall these depersonalized but salient targets, this may lead them to overlook the role played by other specified (and culpable) actors, primarily members of the government.

Owing to its correlational nature, the present study does not allow the establishment of cause-effect relationships between counterfactuals and voting choice. However, because the study introduced a counterfactual completion task into a large scale electoral survey, it enabled the first clear demonstration that a range of open-ended counterfactuals about a deteriorating national economy are associated with voting choice and add significantly to the predictive value of a model of voting choice that is based on voters' evaluation of the national economy. Evidently, when voters generate counterfactual statements to think about the economy, they reflect on how different things might have been, and they do so by making reference to a host of actors, including specified and personalised actors as well as unspecified or reified actors. Our results show that a large proportion of these thoughts, however schematic and simplified they can be, are associated with subsequent choices when voting.

Replication of the present study in different economic and political contexts would be desirable, as would investigation into the possible moderating role of various characteristics of voters, such as their level of interest in politics or their level of uncertainty about who they should vote for. For example, investigators might examine whether the tendency to focus on reified targets, which exonerate the government without a clear identification of other culprits, is related to the level of political awareness. The media play an important role in the reification process (Dunmire 2005). Future investigations might build on this to study the extent to which the media affects the ease with which voters call reified targets to mind when they generate counterfactual statements. Finally, experimental studies could be designed in which participants are, for example, required to evaluate counterfactuals on the national economy when these counterfactuals focus on specified, unspecified, or reified targets. This would enable assessment of the extent to which these counterfactual targets influence voting intention.

To conclude, the present study demonstrated that counterfactuals that are related to the deterioration of the national economy are associated with voting choice even after

controlling for the effect of voters' evaluation of the national economy. This strongly suggests that the perception both of how trends in the national economy actually *are* as well as how they *might have been* different, significantly contributes to an explanation of the dynamics of voting choice.

Funding This work was supported by the Italian Council of University Research [grant number Cofin-PRIN 2005141050]; and the Catholic University of Milan [grant number D1-2832S63].

References

- Alicke, M. D., Buckingham, J., Zell, E., & Davis, T. (2008). Culpable control and counterfactual reasoning in the psychology of blame. *Personality and Social Psychology Bulletin*, *34*, 1371–1381.
- Arceneaux, K. (2003). The conditional impact of blame attribution on the relationship between economic adversity and turnout. *Political Research Quarterly*, *56*, 67–75.
- Bertolotti, M., Catellani, P., Douglas, K. M., & Sutton, R. M. (2013). The “Big Two” in political communication: the effects of attacking and defending politicians' leadership or morality. *Social Psychology*, *44*, 117–128.
- Branscombe, N. R., Owen, S., Gartska, T., & Coleman, J. (1996). Rape and accident counterfactuals: who might have done otherwise and would it have changed the outcome? *Journal of Applied Social Psychology*, *26*, 1042–1067.
- Catellani, P. (2011). Counterfactuals in the social context: The case of political interviews and their effects. In D. Birke, M. Butter, & T. Koepe (Eds.), *Counterfactual thinking-counterfactual writing* (pp. 81–94). De Gruyter: Berlino/Boston.
- Catellani, P., & Covelli, V. (2013). The strategic use of counterfactual communication in politics. *Journal of Language and Social Psychology*, *32*, 495–504.
- Catellani, P., & Milesi, P. (2001). Counterfactuals and roles: mock victims' and perpetrators' accounts of judicial cases. *European Journal of Social Psychology*, *31*, 247–264.
- Catellani, P., & Milesi, P. (2005). When the social context frames the case: Counterfactuals in the courtroom. In D. Mandel, D. Hilton, & P. Catellani (Eds.), *The psychology of counterfactual thinking* (pp. 183–198). London: Routledge.
- Catellani, P., Alberici, A. I., & Milesi, P. (2004). Counterfactual thinking and stereotypes: the nonconformity effect. *European Journal of Social Psychology*, *34*, 421–436.
- Dunmire, P. L. (2005). Pre-empting the future: rhetoric and ideology of the future in political discourse. *Discourse & Society*, *16*, 481–513.
- Dunning, D., & Pappal, M. (1989). Mental addition versus subtraction in counterfactual reasoning: on assessing the impact of personal actions and life events. *Journal of Personality and Social Psychology*, *57*, 5–15.
- Epstude, K., & Roese, N. J. (2008). The functional theory of counterfactual thinking. *Personality and Social Psychology Review*, *12*, 168–192.
- Grieve, F. G., Houston, D. A., Dupuis, S. E., & Eddy, D. (1999). Counterfactual production and achievement orientation in competitive athletic settings. *Journal of Applied Social Psychology*, *29*, 2177–2202.
- Hilton, D. J., McClure, J. I., & Slugoski, B. R. (2005). The course of events: Counterfactuals, causal sequences and explanation. In D. R. Mandel, D. J. Hilton, & P. Catellani (Eds.), *The psychology of counterfactual thinking* (pp. 44–60). London: Routledge.
- Hulsizer, M. R., Munro, G. D., Faterlin, A., & Taylor, S. P. (2004). Molding the past: biased assimilation of historical information. *Journal of Applied Social Psychology*, *34*, 1048–1074.
- Kahneman, D., & Miller, D. T. (1986). Norm theory: comparing reality to its alternatives. *Psychological Review*, *93*(2), 136–153.
- Kahneman, D., & Tversky, A. (1982). The simulation heuristic. In D. Kahneman, P. Slovic, & A. Tversky (Eds.), *Judgement under uncertainty: Heuristics and biases* (pp. 201–208). New York: Cambridge University Press.
- Kray, L. J., Galinsky, A. D., & Wong, E. M. (2006). Thinking within the box: the relational/processing style elicited by counterfactual mind-sets. *Journal of Personality and Social Psychology*, *91*, 33–48.

- Kress, G. (1995). The social production of language: History and structures of domination. In P. H. Fries & M. Gregory (Eds.), *Discourse in society: Systemic functional perspectives* (pp. 115–140). Norwood: Ablex.
- Lau, R. R., & Sears, D. O. (1981). Cognitive links between economic grievances and political responses. *Political Behavior*, 3, 279–302.
- Lewis-Beck, M. S. (2006). Does economics still matter? Econometrics and the vote. *The Journal of Politics*, 68, 208–212.
- Lewis-Beck, M. S., & Paldam, M. (2000). Economic voting: an introduction. *Electoral Studies*, 19, 113–121.
- Lewis-Beck, M. S., & Stegmaier, M. (2000). Economic determinants of electoral outcomes. *Annual Review of Political Science*, 3, 183–219.
- Lewis-Beck, M. S., & Stegmaier, M. (2007). Economic models of voting. In R. Dalton & H. D. Klingemann (Eds.), *The Oxford handbook of political behavior* (pp. 518–537). Oxford: Oxford University Press.
- Mandel, D. R. (2003). Judgment dissociation theory: an analysis of differences in causal, counterfactual, and covariational reasoning. *Journal of Experimental Psychology: General*, 132, 419–434.
- Mandel, D. R., Hilton, D. J., & Catellani, P. (2005). *The psychology of counterfactual thinking*. London: Routledge.
- Markman, K. D., Lindberg, M. J., Kray, L. J., & Galinsky, A. D. (2007). Implications of counterfactual structure for creative generation and analytical problem solving. *Personality and Social Psychology Bulletin*, 33, 312–324.
- Markman, K. D., Klein, W. M., & Suhr, J. A. (2009). *Handbook of imagination and mental simulation*. New York: Psychology Press.
- Marsh, M., & Tilley, J. (2010). The attribution of credit and blame to governments and its impact on vote choice. *British Journal of Political Science*, 40, 115–134.
- McElency, A., & Byrne, R. M. J. (2006). Spontaneous counterfactuals thoughts and causal explanations. *Thinking & Reasoning*, 12, 235–255.
- Morris, M. W., & Moore, P. C. (2000). The lessons we (don't) learn: counterfactual thinking and organizational accountability after a close call. *Administrative Science Quarterly*, 45(4), 737–765.
- N'gbala, A., & Branscombe, N. R. (1997). When does action elicit more regret than inaction and is counterfactual mutation the mediator of this effect? *Journal of Experimental Social Psychology*, 33, 324–343.
- Nario-Redmond, M. R., & Branscombe, N. R. (1996). It could have been better or it might have been worse: implications for blame assignment in rape cases. *Basic and Applied Social Psychology*, 18, 347–366.
- Paldam, M., & Nannestad, P. (2000). What do voters know about the economy? A study of Danish data, 1990–1993. *Electoral Studies*, 19, 363–392.
- Roese, N. J. (1997). Counterfactual thinking. *Psychological Bulletin*, 121, 133–148.
- Roese, N. J., & Olson, J. M. (1993). Self-esteem and counterfactual thinking. *Journal of Personality and Social Psychology*, 65, 199–206.
- Roese, N. J., & Olson, J. M. (1995). Counterfactual thinking: A critical overview. In N. J. Roese & J. M. Olson (Eds.), *What might have been: The social psychology of counterfactual thinking* (pp. 1–59). Mahwah: Erlbaum.
- Rudolph, T. J. (2003). Who's responsible for the economy? The formation and consequences of responsibility attributions. *American Journal of Political Science*, 47, 698–713.
- Rudolph, T. J., & Grant, J. T. (2002). An attributional model of economic voting: evidence from the 2000 presidential election. *Political Research Quarterly*, 55, 805–823.
- Sahar, G. (2008). On the importance of attribution theory in political psychology. Paper presented at the Annual Meeting of the International Society of Political Psychology, Paris, July 9–12.
- Savadori, L., Nicotra, E., Rumiati, R., & Tamborini, R. (2001). Mental representation of economic crisis in Italian and Swiss samples. *Swiss Journal of Psychology*, 60, 11–14.
- Teigen, K. H., Kanten, A. B., & Terum, J. A. (2011). Going to the other extreme: counterfactual thinking leads to polarised judgments. *Thinking & Reasoning*, 17, 1–29.
- Turley, K. J., Sanna, L. J., & Reiter, R. L. (1995). Counterfactual thinking and perceptions of rape. *Basic and Applied Social Psychology*, 17, 285–303.
- Wells, G. L., & Gavanski, I. (1989). Mental simulation of causality. *Journal of Personality and Social Psychology*, 56, 161–169.
- Wong, E. M., Galinsky, A. D., & Kray, L. J. (2009). The counterfactual mind-set: A decade research. In K. D. Markman, W. M. Klein, & J. A. Suhr (Eds.), *Handbook of imagination and mental simulation* (pp. 161–174). New York: Psychology Press.
- Zeelenberg, M., van der Pligt, J., & Manstead, A. S. R. (1998). Undoing regret on Dutch television: apologizing for interpersonal regrets involving actions and inactions. *Personality and Social Psychology Bulletin*, 24, 1113–1119.