



UvA-DARE (Digital Academic Repository)

Start making sense: Compensatory responses to control- and meaning threats

Rutjens, B.T.

Publication date
2012

[Link to publication](#)

Citation for published version (APA):

Rutjens, B. T. (2012). *Start making sense: Compensatory responses to control- and meaning threats*. [Thesis, fully internal, Universiteit van Amsterdam].

General rights

It is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), other than for strictly personal, individual use, unless the work is under an open content license (like Creative Commons).

Disclaimer/Complaints regulations

If you believe that digital publication of certain material infringes any of your rights or (privacy) interests, please let the Library know, stating your reasons. In case of a legitimate complaint, the Library will make the material inaccessible and/or remove it from the website. Please Ask the Library: <https://uba.uva.nl/en/contact>, or a letter to: Library of the University of Amsterdam, Secretariat, Singel 425, 1012 WP Amsterdam, The Netherlands. You will be contacted as soon as possible.

Chapter 3

Yes we can: Belief in progress as compensatory control

This chapter is based on Rutjens, B. T., van Harreveld, F., & van der Pligt, J. (2010). Yes we can: Belief in progress as compensatory control. *Social Psychological and Personality Science*, *1*, 246-252

Control is a fundamental human motivation and we know from the literature that lacking control is generally aversive (e.g., Heckhausen & Schulz, 1995; Maier & Seligman, 1976). Perceptions of personal control over one's life and environment have been found to enhance well-being and the ability to cope with stress, improve performance, reduce anxiety, and decrease perceptions of pain (Fiske & Taylor, 1991; Glass et al., 1973; Luck, Pearson, Maddern, & Hewett, 1999; Thompson & Spacapan, 1991). Rodin and Langer (1977) related control to longevity. Unfortunately, personal control is often less than we would prefer. When on a flight to our holiday destination for example, we are temporarily experiencing lower levels of control. More generally, we do not have full control over our future and that of our children. Thus, the belief that we are in control of events and determine present and future cannot always be upheld (see Kay, Whitson, Gaucher, & Galinsky, 2009).

The literature suggests that when feelings of personal control are low, the next best thing might be to believe that, generally, *things are under control*. People rely on a variety of secondary control strategies (see Rothbaum, Weisz, & Snyder, 1982) to affirm this belief, many of which are religious or superstitious in nature. For example, low control increases belief in God (Kay, Gaucher, Napier, Callan, & Laurin, 2008; Spilka, Shaver, & Kirkpatrick, 1985), and enhances magical thinking (Keinan, 2002; Vyse, 1997). Whereas superstitions generally offer an illusory sense of personal control, belief in God provides an external agent that controls the world (i.e., 'compensatory control'; Kay et al., 2008). Kay et al.'s model of compensatory control asserts that the desire for control can be considered a secondary goal of the more general motivation to prevent seeing our world as random and chaotic. When people lack the ability to exert personal control, they can thus

turn to external sources (e.g., a controlling God) and rest assured that things are under control. Spilka et al. (1985) also argued that one of the most important characteristics of religions is that they satisfy the need to predict and control events. Thus, besides its existential functions (Becker, 1962), religion seems to be closely related to the human need for a predictable and clearly structured reality that is under control.

The current research focuses on a secular belief as provider of compensatory control: belief in progress. This belief has been argued to have complemented, and often even replaced, religion as an important meaning provider, ever since the age of Enlightenment (Gray, 2004). Having faith in a progressive course of history, as opposed to viewing history as cyclic, provides people with the reassurance that things will get better. The notion of human progress thus implies that history spirals up and always results in a net gain (Wagar, 1972); ultimately this should lead to a utopian society (Gray, 2007). Based on its resemblance with religion, we expect that this belief helps to assuage the threat of low control. Moreover, progressive faith bears the promise of humanity gradually advancing morally, socially, and technologically (see Gray, 2004), and thus becoming increasingly more capable of exerting control and reforming the world (Russell, 1929). Indeed, as Gray (2002) argued, believers in progress insist that by using our progressive knowledge we can *control* our environment. In a secular world, having faith in mankind obtaining actual control in the future might be a realistic alternative to faith in an external agent (i.e., God) providing compensatory control. Thus, the notion of human progress provides people with the belief that things will *eventually be under control*.

In sum, we expect that lack of control leads to enhanced belief in progress, because progress promises future control. The main goal of Studies 3.1 and 3.2 was to assess if low levels of personal control enhance belief in progress. In Study 3.1, participants were asked to recall a negative situation from the recent past over which they lacked (or had) control. Subsequently, they were asked to evaluate the author of an essay on the illusory notion of human progress. In Study 3.2 we used an alternative manipulation of control, varied the content of the essay, and added a measure of positive and negative affect to assess possible mood effects. Study 3.3 was a field study where airplane passengers were compared with a baseline group in terms of faith in progress and religious beliefs. In a fourth study, we used several more direct measures of belief in progress such as preferences concerning research funding and policy options dealing with environmental and societal issues. In all cases the options differed in terms of expectations about technological and moral/societal progress¹⁴.

Study 3.1

Method

Forty-three participants (35 females; mean age 20.79 years) were randomly assigned to a no-control vs. control condition. All participants were told that the purpose of the first part of the experiment was to investigate how well people remember specific situations from their past. They were asked to recall a recent event over which they lacked control (or had control), and to summarize the event using approximately 100 words¹⁵. Next, participants

¹⁴ We use the terms technological progress and scientific progress interchangeably. The same applies to moral progress and societal progress.

¹⁵ Responses to the control manipulation were content analyzed. Participants mentioned issues such as computer failure, missing train connections, and dentist visits. Furthermore, because we did not include

were presented with an essay questioning the assumption of human progress. The essay was 171 words in length and argued that progress is illusory, adopting some of the core ideas of Gray (2004, 2007) on the cyclic nature of history (see Rutjens, van der Pligt, & van Harreveld, 2009, for the complete essay). Next, participants were asked to indicate their thoughts about the author. Six adjectives were positive (e.g., “intelligent,” “agreeable”), and four were negative (e.g., “stupid”, “unpleasant”). Answers could range from 1 (*totally disagree*) to 9 (*totally agree*). Seven participants were excluded from the analyses because they handed in incomplete questionnaires, leaving 36 participants.

Results and Discussion

First, the four negative author ratings were reverse scored in order to create an overall index consisting of all ten items ($\alpha = .92$). Participants in the no-control condition rated the author less positively ($M = 4.42$, $SD = 1.31$) than those in the control condition, ($M = 5.63$, $SD = 1.19$), $F(1, 35) = 8.44$, $p < .01$, suggesting that lack of control leads people to more vigorously defend the notion of human progress.

Study 3.2

Study 3.1 could not rule out the possibility that low control triggers general negative reactions toward any essay that is critical and negative in tone. The current experiment therefore employed a full 2 (no-control vs. control) by 2 (anti-progress essay vs. anti-DutchRail essay) between-subjects design. In Study 3.2 we also aimed to establish that the results of the first study were

a manipulation check in this experiment, we approached a second sample of 41 participants. They were presented with the same retrieval task and later were asked to indicate the amount of control they had over the situation. This was higher for those recalling a control situation ($M = 5.61$, $SD = 1.29$) than for those recalling a no-control situation ($M = 2.61$, $SD = 1.53$), $F(1, 40) = 44.51$, $p < .001$. The manipulation also affected generalized feelings of control: Control participants scored marginally higher ($M = 5.83$, $SD = .92$) than no-control participants ($M = 5.13$, $SD = 1.33$), $F(1, 40) = 3.66$, $p = .06$.

specifically caused by the threat of low control, and not by negative mood (e.g., anger aroused by the manipulation, leading to negative author ratings).

We replaced our retrieval manipulation with an anticipatory control manipulation, thus focusing on future loss of control instead of past loss of control. In this way we expected to obtain more pronounced effects of our manipulation on participants' mood, and hence provide an optimal test for the alternative hypothesis that mood causes the negative evaluations of the essay. Our expectations concerning more pronounced mood effects are based on the affective forecasting literature (Wilson & Gilbert, 2003), and more specifically, the *impact bias* (see Wilson & Gilbert, 2005). The impact bias entails that people tend to overestimate their affective reactions to future events. Thus, if lack of control is associated with negative affect, pondering *future* uncontrollability should enhance these affective reactions.

Method

A total of 155 participants (126 females) were randomly assigned to one of four conditions. Mean age was 20.50 years ($SD = 3.60$). They were asked to imagine that the future is (un-) controllable and were subsequently asked to provide three reasons supporting this notion. Next, all participants completed twenty self-report affect items by indicating, on 5-point scales ranging from 1 (*not at all*) to 5 (*very much so*), how they currently felt. Thirteen items were negative (e.g., “annoyed”, “confused”, “angry”; $\alpha = .84$), seven were positive (e.g., “warm”, “proud”, “interested”, $\alpha = .71$).

Then, half of the participants read the anti-progress essay and rated its author using the same ten items as in Study 3.1. The other half of the participants read a control essay of similar length. This control essay provided a critical and quite negative assessment of Dutch Rail, and participants rated

the author on the same items. Again, scores could range from 1 (*totally disagree*) to 9 (*totally agree*).

Results

Essay evaluation. We expected that the no-control manipulation (imagining and reasoning that the future is uncontrollable) would lead to harsher evaluations of the author of the anti-progress essay, as compared to the control condition. We did not expect to find such control-induced differences on the evaluations of the Dutch-Rail essay. First, we reverse-coded the four negative ratings and computed an overall 10-item index ($\alpha = .87$). This index was submitted to a 2 (control: no-control vs. control) by 2 (essay: anti-progress vs. anti-DutchRail) ANOVA. This analysis revealed a main effect of control, $F(1, 151) = 7.11, p = .009$, which was qualified by a significant control x essay interaction effect, $F(1, 151) = 4.58, p = .034$ (see Figure 3.1). LSD posthoc tests revealed that no-control participants rated the author of the anti-progress essay less positively ($M = 4.06, SD = .99$) than control participants ($M = 5.01, SD = 1.21, p = .001$). Regarding the Dutch-Rail essay, ratings by the no-control participants ($M = 4.61, SD = 1.25$) did not differ from ratings by the control participants ($M = 4.71, SD = 1.33$), $p = .70$. Thus, as expected, the manipulation of control only affected the ratings of the author of the anti-progress essay. Further analysis showed that the no-control/anti-progress ratings also differed significantly from the control/anti-DutchRail ratings ($p = .023$), whereas the difference with the no-control/anti-DutchRail ratings approached significance ($p = .056$). No other comparisons were significant.

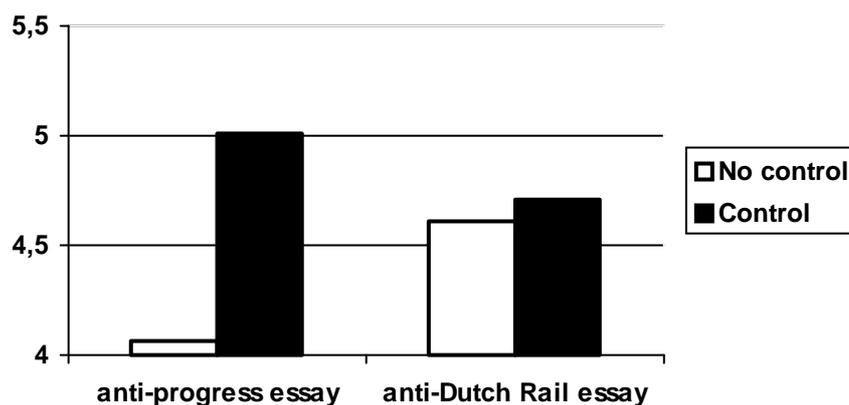


Figure 3.1. Author ratings as a function of control (no-control vs. control) and content of the essay (anti-progress vs. anti-Dutch Rail). Study 3.2

Affect. The positive affect (PA) index was normally distributed, and covered the full range. The negative affect (NA) index was slightly skewed and ranged from 1 to 3 (on a 5-point scale). Overall our manipulation did have a more pronounced effect on the positive items. The manipulation of control did not have an effect on the NA index scores, which were low in both the no-control condition ($M = 1.26$, $SD = .30$) and the control condition ($M = 1.30$, $SD = .35$), $F < 1$. We did find an effect of control on the PA index, $F(1, 154) = 7.52$, $p = .007$. Those in the no-control condition reported lower PA ($M = 2.70$, $SD = .68$) than those in the control condition ($M = 2.96$, $SD = .65$)¹⁶. Importantly, statistically controlling for PA did not alter the pattern of results regarding the author-evaluations (following Muller, Yzerbyt, and Judd, 2008, we controlled for the interaction between PA and essay; main effect of control $p = .010$, interaction effect of control x essay $p = .035$).

¹⁶ Research findings concerning the effects of low control on affect are mixed. Some studies did not find mood effects (e.g., Fritsche et al., 2008; Kay et al., 2008); other studies obtained mood effects, but also show that controlling for these does not alter the effects of low control (e.g., Walker & Sorrentino, 2000). Perhaps low control does not *amplify* negative mood, but rather *attenuates* positive mood. Results reported by Walker and Sorrentino (2000, p. 441) as well as recent research (Rutjens, van Harreveld, & van der Pligt, in preparation) supports this possibility.

Discussion

Results of Study 3.2 replicated and extended the findings of Study 3.1. No-control participants rated the author of the anti-progress essay more negatively than control participants. However, this effect was not present when the (critical) content of the essay was unrelated to the concept of progress. Moreover, our results could not be explained by mood effects. This is consistent with other research examining the motivational consequences of low control (Kay et al., 2008; Walker & Sorrentino, 2000).

Study 3.3

Study 3.3 is a field study comparing two groups of participants; some were asked to answer a questionnaire during an airplane flight, others while residing on a university campus. The former were expected to experience lowered feelings of control, and hence an increased belief in progress.

Method

Participants. Participants ($N = 25$) completed a questionnaire while on a European flight, and 18 baseline participants completed the questionnaire on the campus of a Dutch university. Of the 43 participants (all students), 32 were female. Mean age was 22.60 ($SD = 3.27$). Age and gender did not differ between conditions. All participants were asked to indicate the amount of control they were currently experiencing, ranging from 1 (*no control at all*) to 7 (*total control*). Next, they completed five items measuring belief in progress (e.g., “In two decades, we will live in a better world than that of today”) and four items measuring religious belief (e.g., “I believe that a higher power exerts influence over the world”). We also included five filler items. All items were rated on 7-point scales. Finally, we asked participants to

indicate if they considered themselves to be religious (yes/no); all 43 participants answered “no”.

Results and Discussion

Factor analysis. We submitted the nine items to a factor analysis, which after varimax rotation resulted in three components with Eigenvalues > 1, explaining 54.14% of the total variance. The first component consisted of three items measuring religious belief and the second component tapped into belief in progress. The remaining two items were not taken into further account because of lack of interpretative quality.

Main analyses. A one-way ANOVA showed that airplane passengers reported lower feelings of control ($M = 3.96, SD = 1.43$) than the participants on campus ($M = 5.28, SD = 1.36$), $F(1, 42) = 9.25, p < .01$. The airplane passengers also reported more belief in progress ($M = 4.13, SD = 1.18$ versus $M = 3.41, SD = .76$), $F(1, 42) = 5.20, p < .05$. Religious beliefs did not differ, $F < 1$. Furthermore, decreased feelings of control were associated with an increased belief in progress, $r = -.36, p = .018$. Religious belief did not correlate with feelings of control, $r = .08, p > .50$. The correlation between belief in progress and feelings of control raised the possibility that feelings of control mediate the effect of location (airplane or campus) on belief in progress. Mediation analyses confirmed that the airplane passengers reported an increased belief in progress because they experienced lower levels of control. Following the procedures outlined by Baron and Kenny (1986), we found that experienced control mediates the effects of location on belief in progress (see Figure 3.2). The original effect of location on belief in progress ($\beta = -.34, t = -2.28, p = .028$) decreased to non-significance when controlling for experienced control ($\beta = -.22, t = -1.39, p = .17$), Sobel's $z = 1.63, p = .05$

(one-tailed). This rules out the possibility that flying participants reported higher belief in progress because they were primed with the concept of technological progress (being in an airplane)¹⁷.

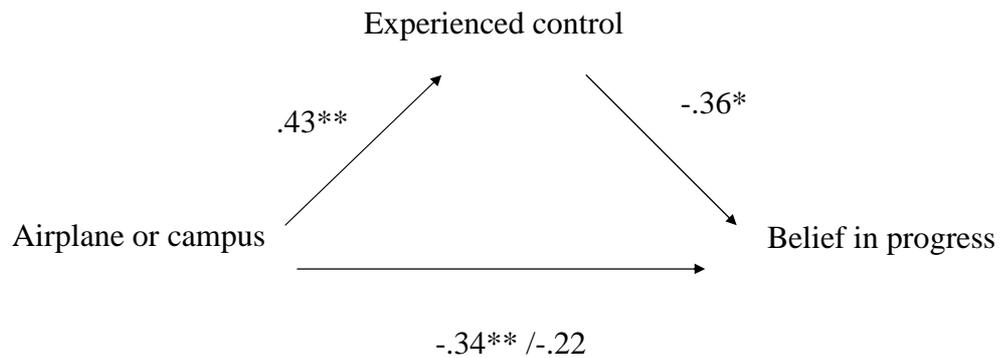


Figure 3.2. Mediation of location (airplane or campus) on belief in progress by experienced control, Study 3.3. Note. * $p < .05$. ** $p < .01$.

In sum, participants that completed our questionnaire in an airplane reported lower levels control, causing them to bolster belief in progress. Although other researchers have found effects of low control on religious beliefs (e.g., Kay et al., 2008), our flying participants did not report higher religious beliefs than those at campus. This is probably due to our secular sample and provides indirect evidence for Gray’s argument (2002) that belief in progress can be seen as a secular replacement of religious compensatory control.

Study 3.4

This last experiment aimed to extend the findings of the previous experiments by using a variety of more direct measures, as opposed those of Studies 3.1 and 3.2 (rating an anti-progress essay). We measured belief in progress and its

¹⁷ We also tested the reverse causal effect (belief in progress determining feelings of control). The effect of location on control ($\beta = .43$, $t = 3.04$, $p = .004$) remained significant when controlling for belief in progress ($\beta = .35$, $t = 2.37$, $p = .023$), Sobel’s $z = 1.31$, $p = .10$ (one-tailed).

importance by assessing preferences on issues such as research funding, and environmental and societal decision-making. We also used a measure in which participants were instructed to draw graphs to summarize their expectations about technological and moral progress.

Method

Participants. A total of 96 participants (65 females) participated in this study, as part of a larger laboratory session. Mean age was 21.12 years ($SD = 4.03$). All participants received money or course credit in exchange for participation. Two participants left several parts of the questionnaire blank and were excluded from the analyses.

Procedure and design. Control was manipulated using a modification of the retrieval task from Study 3.1 combined with the future oriented task from Study 3.2. Participants were again told that we were interested in the extent to which people remember certain situations. They were randomly assigned to the no-control or control condition and were specifically asked to recall a *negative* event over which they lacked or had control. Subsequently, they were asked to provide three reasons supporting the notion that the future is (un-)controllable. The manipulation was followed by three manipulation check items. The first assessed experienced control in the retrieval scenario (“How much control did you have over the situation you described?”). The second item assessed the valence of the retrieved situation (this should not differ between conditions). The third item gauged generalized feelings of control (“In general, do you feel that you are the actor in, or the director of, your life?”). All items were measured on 7-point scales.

Next, participants were presented with three dependent measures. The first two comprised ranking tasks concerning the funding of science and

solutions to an environmental problem. The third measure consisted of a description of a societal problem and two possible solutions (see Table 3.1).

Table 3.1.
Overview of first part of Study 3.4

<i>Measure</i>	<i>Task</i>	<i>Options</i>
1. Funding science	Rank 5 research areas in terms of funding priority (highest budget)	Stem cell research * History of Dutch culture Nanotechnology * Ethics in business administration Biodiversity in Europe
2. Environmental decision making	Rank 3 possible solutions to reduce CO ₂ emission	Further development of hybrid cars and electric vehicles * Road pricing Restrictions in car use (odd number plates at odd days)
3. Societal decision making	Choose best option to solve major societal problems	Back to old-fashioned norms and values (“looking back”) Progressive solutions by focusing on the future (“looking ahead”) *

Note. Progress-related options are marked with an asterisk.

Subsequently, approximately half of the participants continued with an unrelated experiment (which was part of the same laboratory session) while the remaining participants ($N = 43$) proceeded with the second part of the current experiment. Given the length of the first part of the experiment and the opportunities provided to restore feelings of control (by affirming belief in progress) we decided to repeat our control manipulation (22 no-control and 21 control participants), by ostensibly trying to gauge participants’ memory of the (un)controllable event for a second time to assess how well they could describe the events they mentioned earlier in the experiment.

After the repeated manipulation, participants were presented with a task, measuring general belief in progress. The first part of this task was presented as part of a study on scientific and technological developments in the 21st century. Participants were presented with two empty graphs depicting

the time spans of 2009-2020 and 2009-2100. They were asked to draw a line that best reflected their views on progress and were told they were totally free in drawing a line that represented their views on future developments. A second similar task focused on moral and societal progress. All graphs were 35 mm. in height, so that the maximum increase or decrease of a drawn line was approximately 18 mm. Figure 3.3 depicts an example of one of the graphs. After this task, participants were presented with demographic questions, thanked, and dismissed.

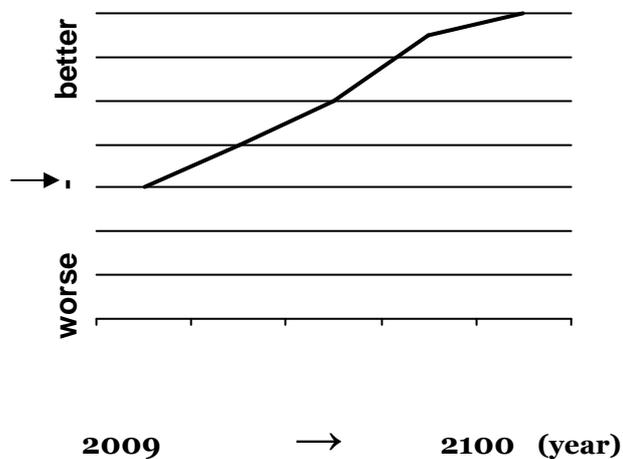


Figure 3.3. Example of graph, Study 3.4

Results

Manipulation check. No-control participants reported less control over the retrieved situation ($M = 1.71$, $SD = .99$) than those having control ($M = 5.79$, $SD = 1.13$), $F(1, 93) = 352.13$, $p < .001$, and reported lower feelings of being in charge ('the director') of their own life ($M = 4.39$, $SD = 1.36$) than participants having control ($M = 5.26$, $SD = 1.24$), $F(1, 93) = 10.24$, $p < .01$. The aversiveness of the retrieved situation did not differ between conditions, $F < 1$ (in both conditions $M > 6.00$).

Funding science. We expected our no-control participants to assign higher rank values to progress-related research areas (indicating that these deserved increased funding from the Dutch national science foundation). We computed a ‘progress’ index based on the stem cell and nanotechnology rankings. Results showed that participants lacking control assigned higher rank values to the progress-related research areas than those having control, $F(1, 93) = 12.37, p < .01$ (see Table 3.2).

Environmental and societal decision-making. The development of, and investment in, hybrid cars was compared with two other solutions and participants were asked to rank these solutions in terms of their attractiveness. As expected, participants lacking control assigned a higher rank value to the hybrid car solution than participants having control, $F(1, 93) = 4.30, p < .05$ (see Table 3.2).

Table 3.2.

Rank values of stem cell and nano-research and hybrid car technology as a function of control, Study 3.4

	No-control	Control
Ranking (1-5) of stem cell and nano research	2.09 (.64)	2.61 (.79)**
Ranking (1-3) of investing in hybrid cars and EV's	1.08 (.27)	1.26 (.54)*

Note. Scores are the average rank values. * $p < .05$ ** $p < .01$. SD's in parentheses.

With respect to the question how to combat contemporary societal problems, participants were asked to make a choice. A total of 96 % of the participants in the no-control condition chose the progressive option, for control participants this percentage was somewhat (but not significantly) lower: 85.7%, $\chi^2(1) = 2.9, p = .09$.

General belief in progress. For all four graphs, we measured the vertical difference between the starting point and endpoint of the line drawn by each participant. This served as a measure of belief in short-term and long-term technological and short-term and long-term moral progress. No-control participants expected more long-term technological progress than control participants, $F(1, 42) = 5.75, p = .021$. For short-term technological progress the difference was not significant, $p = .13$. No-control participants expected more short-term and long-term moral progress than control participants: F -values were 6.51 ($p = .015$) and 5.72 ($p = .021$), respectively (see Table 3.3).

Table 3.3.

Belief in progress in the drawing task (in mm.), Study 3.4.

<i>Graph</i>	No-control	Control
Short-term technological progress	13.50 (6.33)	10.76 (5.22)
Long-term technological progress	17.82 (4.55)	14.10 (5.59)*
Short-term moral progress	7.55 (8.99)	.67 (8.67)*
Long-term moral progress	6.77 (8.72)	1.10 (6.64)*

Note. * $p < .05$. SD's are in parentheses.

Discussion

Study 3.4 showed that lack of control leads to increased preference for progressive research as well as progressive environmental and societal policymaking. Moreover, the graphs depicting participants' expectations for both the coming ten years and the coming century also showed that participants lacking control expect more progress.

General Discussion

In four experiments we found support for our prediction that lack of control enhances belief in progress. Studies 3.1 and 3.2 showed that reduced control leads people to more vigorously defend the concept of progress, as indicated

by their ratings of an anti-progress essay. Study 3.2 (and Study 3.4, where all participants were asked to recall a negative situation) ruled out the possibility that these effects were caused by mood differences, and also showed that lack of control does not trigger negative evaluations in general. Study 3.3 corroborated these findings in a field (or rather air) study, showing that lack of control in a real life situation enhances faith in progress. Study 3.4 revealed similar findings on a variety of more direct measures. Participants lacking personal control prioritized science aimed at providing technological progress and indicated a higher preference for progressive solutions to solve major environmental and societal issues. Results also showed that low control participants expressed a more general belief in technological and moral progress than participants having control.

According to some, belief in progress is rooted in religious belief and can be seen as a humanistic, secular replacement of religion (Gray, 2004). Previous research has shown that religious belief can assuage the threat of low personal control by ensuring that things are under control. Our findings show that belief in progress can fulfill a similar function by ensuring that things will eventually be under control. Lack of control has been found to lead to increased beliefs in God (e.g., Kay et al., 2008; Spilka et al., 1985), and our findings show that it also increases belief in human progress. Interestingly, our secular low control participants in Study 3.3 reported an enhanced belief in progress, but no increase in religious beliefs, supporting Gray's observation that, for some, belief in progress is a secular equivalent of religion. Belief in God has been argued to provide a compensatory function, and, according to Spilka et al. (1985), can work in two ways. One way is to put faith in the notion that God as an external agent is in control and therefore everything will turn

out well (i.e., God as controller, see also Kay et al., 2008). Another way is to try to exert control over events via prayer or by performing prescribed rituals. Belief in progress however is, as Russell (1929) stated, fuelled by mankind's desire to exert control over the world (i.e., understanding and reforming it). It provides individuals with the promise that things *eventually will be under control*, without having to rely on a supernatural external agent.

Interestingly, the graphs our participants drew in Study 3.4 show that lack of control not only leads to an enhanced belief in technological progress, but also increases faith in moral progress. Gray's (2004, 2007) core argument is that whereas scientific and technological progress is a fact, moral progress (see footnote 14) is nonexistent. This means that, while the notion of scientific progress requires mere observation, the notion of moral progress requires faith. An example of this would be to believe that something that is morally problematic today (e.g., the fact that certain countries subscribe to the death penalty or the role of bankers in the credit crunch; things an individual generally has no control over) will be different tomorrow (e.g., the death penalty will be abolished worldwide; banks will be under tight control). The graphs drawn by our participants show that this faith is practically absent for participants experiencing control, while those in the no-control condition clearly bolstered their belief in moral progress (see Table 3.3). The graphs depicting scientific progress also resonate well with Gray's observation that this type of progress is virtually undisputed. All participants expressed an increased belief in scientific progress, yet, interestingly, low control participants even more so than those experiencing normal levels of control.

In sum, belief in progress seems to harbor a restorative quality when personal control is low. To return to the title of this article; the need to believe

in progress might also have played a role in Obama's victory in the 2008 US presidential election. Although the recession might have reflected badly on the Bush Administration, it might well be the case that the uncertainties and unpredictability caused by the onset of the recession helped to tip the balance in the direction of Obama and his campaign of hope and progress. As president Obama put it in a speech delivered in 2004: "In the end, that's what this election is about. Do we participate in a politics of cynicism or a politics of hope? (...) Hope in the face of uncertainty. The audacity of hope!"