

Contingent versus Unconditional Incentives in WWW-Studies

Anja S. Göritz¹

Abstract

Five experiments examined how participation in WWW-studies was influenced by framing the reception of an incentive as contingent on the completeness of the submitted questionnaire. Four experiments were carried out in a university-based online panel and one in a market research online panel. Four times the incentive was a prize draw and once it was a personal gift. In each experiment, two conditions were contrasted: one group received an e-mail invitation mentioning that all participants are eligible for the incentive (= unconditional incentive), whereas the other group was told that only those participants who answer every question in the questionnaire would receive the incentive (= contingent incentive). Dependent measures were response rate, retention rate, number of omitted closed-ended items, length of answers to open-ended questions, and stereotypical answering of grid-like question batteries. There were no significant effects. The results of the individual experiments were then meta-analytically aggregated. It was revealed that contingent relative to unconditional incentives decrease response to a study, while at the same time the sparser data are not compensated for by a superior data quality or retention.

1 Introduction

There has been some research on cover letters as a vehicle to persuade individuals to respond to a survey request (e.g., Dillman, 1978). However, compared to the wealth of research on incentives to increase response and data quality, comparatively little attention has been devoted to cover letters (Furse and Stewart, 1984). This asymmetry is even more pronounced with online than with offline surveys. With most list-based WWW-studies, the equivalent of a cover letter is the e-mail invitation. Typically the e-mail invitation informs potential participants about the topic of the study, why the research is important, who sponsors the study, the time it takes to fill out the questionnaire, and the incentive that respondents can get for their participation.

¹ Department of Psychology, Organizational and Social Psychology, University of Erlangen-Nürnberg, Lange Gasse 20, 90403 Nuremberg, Germany; anja.goeritz@wiso.uni-erlangen.de

A very simple option is to mention in the e-mail invitation that the reception of the incentive is contingent upon the submission of a completely filled out questionnaire. That is, only those people who answer every single question are eligible for the incentive. Restricting the eligibility for the incentive in this way might lead to a better data quality because participants, in order to get the incentive, might make a stronger effort to fill out the questionnaire more completely and more conscientiously. This paper examines the effectiveness of this technique and makes recommendations on the use of contingent incentives.

In detail, the paper studies the impact of contingent versus unconditional incentives on the quantity and quality of the collected data. Data quantity is reflected in the response rate and the retention rate. The response rate is the ratio of people who have accessed a study divided by the total number of people solicited to take part in this study. The retention rate is 100 minus the dropout rate. It is the ratio of respondents who have viewed the complete study materials divided by the total number of respondents who have accessed the study. Important facets of data quality are the length of participants' answers to open-ended questions and the number of omitted closed-ended questions. Another aspect of data quality is stereotypical answering of grid-like question batteries. To answer a grid of questions stereotypically (cf. Couper, Traugott, and Lamias, 2001; Göritz, 2004) implies that the same answer (e.g., the "I disagree" choice) down a column is clicked for all items of the grid.

One theory that is readily applicable to explain the effect of a contingent incentive is reactance theory (Brehm and Brehm, 1981). Reactance theory states that if a behavioral freedom is threatened, individuals will experience an adverse state of arousal called reactance. They will try to reduce the arousal by restoring the threatened freedom. Therefore, if an e-mail invitation stresses the reception of an incentive as contingent on the completeness of the questionnaire, respondents might experience this as a threat to their freedom *not* to answer all items in a questionnaire (cf. Biner, 1988). The respondent can easily restore his or her freedom by not taking part in the study. The result would be a lower response rate if an incentive were contingent on the completeness of the questionnaire than if an incentive were unconditional. Any reactance when offering a contingent incentive would be an undesired phenomenon for the researcher because respondents who would otherwise have taken part are put off from the survey.

Reactance is not the only mechanism by which a contingent incentive might decrease the response rate. Awarding an incentive only if all questions are answered might primarily dissuade non-serious participants who are merely curious, flippant, or playful, but who do not have the firm intention to conscientiously fill out the questionnaire. This mechanism is called selective (i.e., qualified) dissuasion – meaning that not all kinds of potential participants would be deterred alike, but that non-serious participants are more strongly dissuaded from participating than serious participants. Selective dissuasion would be

desirable for the researcher because a contingent incentive primarily weeds out those respondents who would otherwise produce low-quality data.

While both reactance and selective dissuasion postulate a decreased response rate, they make different predictions about the quality of the collected data. If the contingent incentive dissuades primarily non-serious participants, the remaining sub-sample of serious participants is expected to produce data of higher quality than a control group with an unconditional incentive. Thus, if selective dissuasion occurs, the remaining participants in the contingent incentive condition are expected to answer open-ended questions more elaborately and grid-like question batteries less stereotypically than participants with an unconditional incentive. By contrast, if reactance theory holds, the collected data should not differ in quality between the contingent and unconditional incentives condition. People in the contingent incentive condition would decide to take part in the study regardless of their own conscientiousness, with the result that they do not differ in conscientiousness from the participants in the unconditional incentives condition.

2 Empirical studies

Five experiments were conducted. Each time the e-mail invitation's announcement of a material incentive was manipulated such that it was either contingent or not contingent on the completeness of the questionnaire. There were two dichotomous dependent measures: response status (responded or refused) and retention status (retained or dropped out). In addition, there were three continuous dependent measures: number of skipped closed-ended questions, length of answers to open-ended questions, and number of grid-like question batteries that were answered in a stereotypical way. For analyses pertaining to the three continuous measures, only non-dropouts were taken into account². In addition, for stereotypical answering, only respondents who answered all grids completely were admitted.

2.1 Experiment 1

This study was entitled "Information overload when working with the Internet". It was conducted in July 2001 in a German market research non-probability online panel, which was owned by a car manufacturing company. An online panel is a pool of pre-recruited respondents who have signed up to occasionally take part in WWW-studies (cf. Göritz, in press). Half of the panelists were randomly assigned to the control group: that is, they were sent an e-mail invitation stating that "All

² The dependent measures were intended to capture distinct aspects of data quality and quantity. For example, had also dropouts been admitted to the analysis of the length of answers to open-ended questions, the length of answers to open-ended questions would have been confounded with retention and therefore no longer been a discrete facet of data quality.

participants are entered into a lottery drawing. We raffle 400 bonus points and as a consolation prize 20 key rings". The experimental group received an identical e-mail aside from mentioning that "All participants who have filled out the questionnaire completely are entered into a lottery drawing. We raffle 400 bonus points and as a consolation prize 20 key rings". One bonus point was worth 0.25 EUR. The field time of the study was nine days. Shortly before the study's closing date, a reminder was e-mailed to people who had not yet responded. The reminder repeated the incentive information of the original e-mail invitation. Mean age of the invited sample was 33 years ($SD = 9$), and 33% were women.

No statistically significant differences were found for any of the measures. In detail, the response rate in the control group (66.3%) did not differ from that in the experimental group (62.1%), as was determined by means of the phi-coefficient, $\phi = -.04$, $n = 760$, $p = .23$. The retention rate was 94.8% in the control and 94.9% in the experimental group, $\phi < .01$, $n = 488$, $p = .97$. The number of skipped closed-ended questions out of a total of nine questions did not differ between the control group (0.17) and the experimental group (0.14), as was determined by means of a t-test for independent samples, $t(461) = -.69$, $p = .49$. The length of answers to four open-ended questions was in total 96.5 characters in the control and 111.1 in the experimental group, $t(461) = 1.38$, $p = .17$. The number of grid-like question batteries that were answered in a stereotypical fashion out of a total of two grids in the study was 0.07 in the control and 0.08 in the experimental group, $t(317) = .13$, $p = .90$.

2.2 Experiment 2

This study was entitled "Human relations in working life" and was conducted in October 2001 in a university-based non-probability online panel. Half of the panelists were randomly assigned to the control group: that is, they were sent an e-mail invitation stating that "We raffle 4 x 50 DM among all participants", whereas the experimental group was told that "We raffle 4 x 50 DM among all participants who have filled out the questionnaire completely". The study was in the field for 19 days. Shortly before the closing date, an e-mail was sent to people who had not yet responded. This time, the reminder did not repeat the incentive information of the original e-mail invitation. The invitees were on average 37 years ($SD = 9$), and 39% of them were women.

Again, there were no statistically significant effects. In detail, the response rate was 79.5% in the control and 72.3% in the experimental group, $\phi = -.09$, $n = 166$, $p = .28$. The retention rate was 87.9% in the control and 88.3% in the experimental group, $\phi = .01$, $n = 126$, $p = .94$. The number of skipped closed-ended questions out of a total of 44 questions was 0.14 in the control and 0.04 in the experimental group, $t(79.8) = -1.59$, $p = .12$. The length of the answer to one open-ended question was 8.8 characters in the control and 15.7 in the experimental group,

$t(109) = .85, p = .40$. The number of grids that were answered in a stereotypical fashion out of a total of six grids was 0.31 in the control and 0.15 in the experimental group, $t(109) = -1.31, p = .19$.

2.3 Experiment 3

This study was a partial replication of Experiment 2 and was conducted in January 2002 in a university-based online panel. Half of the panelists were sent an e-mail invitation stating that "We raffle 3 x 20 DM among all participants", whereas the experimental group received an otherwise identical e-mail but mentioning that "We raffle 3 x 20 DM among all participants who have filled out the questionnaire completely". The field time was 15 days. A reminder that repeated the incentive information of the original e-mail invitation was sent shortly before closure of the study. The invited sample's age was 36 years ($SD = 9$). Of this sample, 54% were women.

Again, there were no statistically significant effects. In detail, in the control group, 72.7% of the invitees responded to the survey. In the experimental group this percentage was 68.8, $\phi = -.04, n = 65, p = .72$. The retention rate was 79.2% in the control and 86.4% in the experimental group, $\phi = .10, n = 46, p = .52$. The number of skipped closed-ended questions out of a total of 46 questions was 0.05 in the control and 0.16 in the experimental group, $t(29.8) = 1.04, p = .31$. The length of the answer to one open-ended question was 13.3 characters in the control and 0 in the experimental group, $t(18,0) = -1.46, p = .16$. The number of stereotypically answered grids out of six grids was 0.42 in the control and 0.21 in the experimental group, $t(36) = -.83, p = .41$.

2.4 Experiment 4

This study was entitled "Attitudes in professional life". It was conducted in July 2004 in a university-based online panel. The study was based on a 2x2 factorial design. Half of the panelists were offered a result summary in addition to the regular incentive; the other half were not offered a result summary. The offer of a summary was crossed with the framing of the incentive as contingent or as unconditional. Half of the panelists were randomly assigned to the control group: that is, they were sent an e-mail stating that "As a thank you, each participant is given a surprise gift worth 3 EUR", whereas the experimental group was told "As a thank you, each participant who has filled out the questionnaire completely is given a surprise gift worth 3 EUR". The field time was seven days. Mean age of the invited sample was 38 years ($SD = 9$). Of this sample, 42% were women. The analyses were conducted separately for the two different subsets of participants who were either offered a result summary or not.

2.4.1 Subset with result summary

There were no statistically significant effects. In detail, the response rate in the control group was 48.6% and in the experimental group 43.2%, $\phi = -.05$, $n = 146$, $p = .52$. In the control group, the retention rate was 88.6%, whereas in the experimental group it was 84.4%, $\phi = -.06$, $n = 67$, $p = .62$. The number of skipped closed-ended questions out of a total of 56 questions was 0.19 in the control and 0.07 in the experimental group, $t(56) = -.95$, $p = .34$. The length of the answer to one open-ended question was 14.8 characters in the control and 17.2 in the experimental group, $t(56) = .83$, $p = .41$. The number of grids that were answered in a stereotypical fashion out of six grids was 0.04 in both control and experimental group, $t(51) = .08$, $p = .94$.

2.4.2 Subset without result summary

No statistically significant differences were found for any of the measures: The response rate in the control group was 52.9% and in the experimental group 46.1%, $\phi = -.07$, $n = 146$, $p = .41$. The retention rate was 91.9% in the control and 94.3% in the experimental group, $\phi = .05$, $n = 72$, $p = .69$. The number of skipped closed-ended questions out of 56 questions was 0.15 in the control and 0.18 in the experimental group, $t(65) = .28$, $p = .78$. The length of the answer to one open-ended question was 18.3 in the control and 18.9 in the experimental group, $t(65) = .27$, $p = .79$. The number of grids that were answered in a stereotypical fashion out of six grids was 0.06 in the control and 0.17 in the experimental group, $t(59) = .75$, $p = .47$.

2.5 Experiment 5

This study was entitled "Flexibilization of work" and was conducted in September 2004 in a university-based online panel. The study was conducted in two different versions. For some participants this questionnaire was the second wave of a study, meaning only the respondents to an earlier Wave 1 were invited to this version. For the other participants, this study was the first of its kind: that is, the nonrespondents to the earlier Wave 1 were invited to that version. In each version, half of the panelists were sent an e-mail invitation stating that "As a small thank you, four surprise gifts will be raffled among all participants. Each gift is worth 20 EUR", whereas the experimental group was told that "As a small thank you, four surprise gifts will be raffled among all participants who have filled out the questionnaire completely. Each gift is worth 20 EUR". The field time was six days. Mean age of the invited sample was 38 years ($SD = 9$). Women participants

accounted for 41%. The two different subsets of participants were analyzed separately.

2.5.1 Subset of respondents to Wave 1

No statistically significant differences were found for any of the measures: The response rate in the control group was 66.7% and was 59.5% in the experimental group, $\phi = -.07$, $n = 298$, $p = .20$. The retention rate was 91.0% in the control and 95.5% in the experimental group, $\phi = .09$, $n = 188$, $p = .23$. The number of skipped closed-ended questions out of 56 questions without enforced answer was 0.12 in the control and 0.17 in the experimental group, $t(172) = .80$, $p = .43$. The number of grids that were answered in a stereotypical fashion out of four grids was 0.07 in the control and 0.05 in the experimental group, $t(172) = -.34$, $p = .73$.

2.5.2 Subset of non-respondents to Wave 1

There were no statistically significant effects. In detail, the response rate in the control was 24.6% and in the experimental group 25.0%, $\phi < .01$, $n = 242$, $p = .94$. The retention rate was 93.1% in the control and 93.5% in the experimental group, $\phi < .01$, $n = 60$, $p = .95$. The number of skipped closed-ended questions out of 50 questions without enforced answer was 0.04 in the control and 0.03 in the experimental group, $t(54) = -.05$, $p = .96$. The number of stereotypically answered grids out of four grids was 0.11 in the control and 0.07 in the experimental group, $t(54) = -.45$, $p = .65$.

To summarize, in all five experiments a pattern was found that contingent incentives decrease response. However, no tendency reached a conventional level of statistical significance in either study. Therefore, individual study results were meta-analytically integrated to find out whether the five single experiments were merely underpowered to detect small effects.

3 Meta-analytical integration

There were five outcome variables, and so five separate meta-analyses were conducted: As response and retention are dichotomous outcome measures, odds ratio was chosen as the effect-size measure (Fleiss, 1994; Haddock, Rindskopf, and Shadish, 1998)³. Because the other three dependent measures (i.e., number of

³ An odds ratio is the odds of an event (e.g., response to the survey) occurring in one group (e.g., incentive is contingent upon completeness of the questionnaire) divided by the odds of the event occurring in the other group (e.g., control group). If an experimental intervention (e.g., incentive is contingent) has no effect, the odds ratio is 1. If it reduces the chance of having the

skipped closed-ended questions, length of answers to open-ended questions, and number of stereotypically filled out grids) are continuous outcomes, the standardized mean difference d (Lipsey and Wilson, 2001) was used as effect size measure.

3.1 Heterogeneity

Because the seven comparisons that pertained to response and retention were homogeneous, $Q = 1.11$, $df = 6$, $p = .98$ and $Q = 1.79$, $df = 6$, $p = .94$ (cf. Cooper and Hedges, 1994), an inverse-variance fixed-effects model was chosen for pooling individual odds ratios. The comparisons that pertained to the number of skipped closed-ended questions, length of answers to open-ended questions, and number of stereotypically filled out grids were also homogeneous, $Q = 3.93$, $df = 6$, $p = .69$, $Q = 3.53$, $df = 4$, $p = .47$, and $Q = 2.84$, $df = 6$, $p = .83$, respectively. Therefore, a fixed-effects model was chosen for pooling individual d 's.

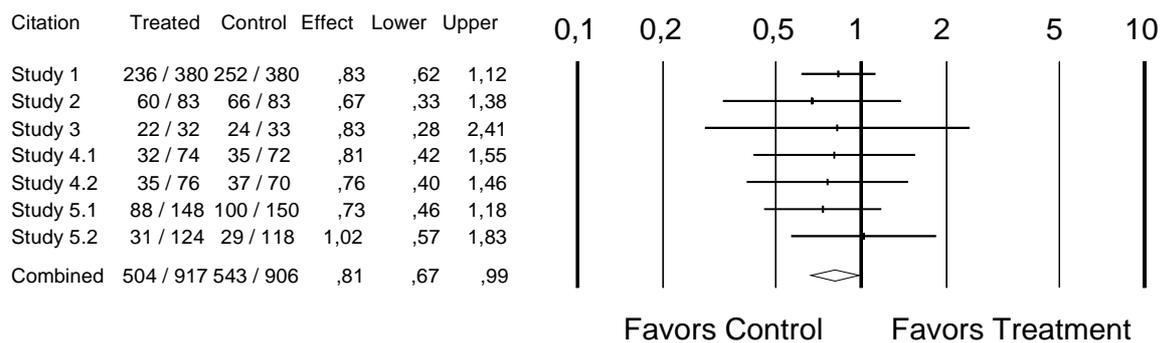


Figure 1: Individual and overall effect-size of the impact of contingent (= treatment) versus unconditional incentives (= control) on response in five WWW-studies. The tick on each horizontal line of the forest plot represents the odds ratio for this study. The diamond represents the result of combining the data from all studies. Its center point represents the odds ratio of the combined result, and its width represents the 95% confidence interval..

3.2 Results

The overall effect of framing the reception of an incentive as contingent upon the completeness of the questionnaire on response is odds ratio = 0.81 with a 95% confidence interval (CI) ranging from 0.67 to 0.99 (cf. Figure 1). Because the CI does not include "1", the overall effect is significant, meaning that contingent

event, the odds ratio is less than 1; if it increases the chance of having the event, the odds ratio is bigger than 1. The smallest value an odds ratio can take is zero.

incentives decrease the response rate. In detail, if incentives are contingent upon the completeness of the questionnaire, the odds of invitees responding to a study are only 81% of the odds of responding with unconditional incentives. Transforming this odds ratio into the standardized mean difference using the method by Cox (1970), which is recommended by Sánchez-Meca, Marín-Martínez, and Chacón-Moscoso (2003), yields $d = -0.13$. Thus indeed, people in the contingent incentive condition are less willing to participate than those in the unconditional incentive condition. An analysis of possible differences in the quality of the collected data will tell whether this outcome can be attributed to the mechanism of reactance or not.

The overall effect of a contingent versus an unconditional incentive on retention is odds ratio = 1.17. Because the 95% CI is 0.73 - 1.87, contingent versus unconditional incentives do not have a statistically significant effect on retention (cf. Figure 2). This finding is in line with reactance.

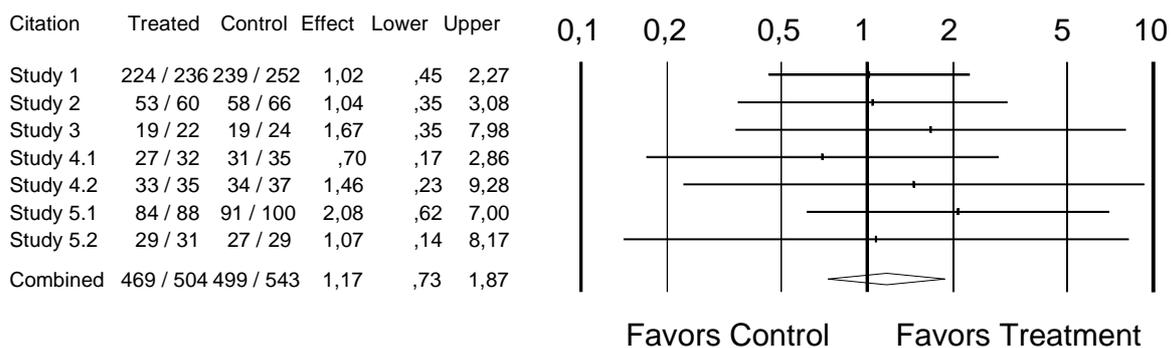


Figure 2: Individual and overall effect-size of the impact of contingent versus unconditional incentives on retention in five WWW-studies.

The overall effect of a contingent versus unconditional incentive on the number of skipped closed-ended questions was $d = -0.04$, CI: $-0.17 - 0.09$. Because the CI does include zero, this effect is not significant (cf. Figure 3). This finding, too, is in line with reactance.

The overall effect of framing the reception of the incentive as contingent upon the completeness of the questionnaire on the length of answers to open-ended questions is $d = 0.10$ with a 95% CI ranging from -0.04 to 0.25 . This effect was not significant (cf. Figure 4). This finding, too, is in line with reactance.

The overall effect of framing the reception of the incentive as contingent upon the completeness of the questionnaire on the number of stereotypically filled out grids is $d = -0.04$ with a 95% CI ranging from -0.18 to 0.09 . This effect is not significant (cf. Figure 5) and therefore, in line with reactance.

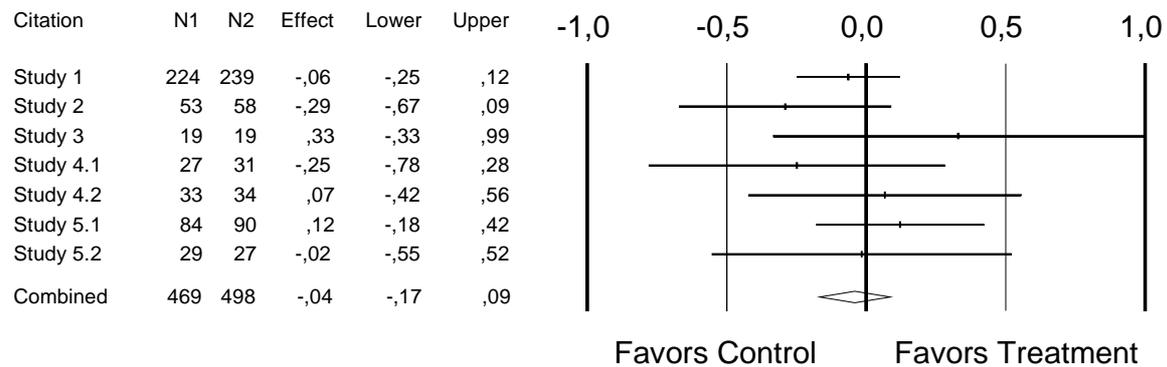


Figure 3: Individual and overall effect-size of the impact of contingent versus unconditional incentives on item-nonresponse to closed-ended questions in five WWW-studies. The tick on each horizontal line of the forest plot represents the standardized mean difference (d) for this study. The diamond represents the result of combining the data from all studies. Its center point represents the d of the combined result, and its width represents the 95% CI.

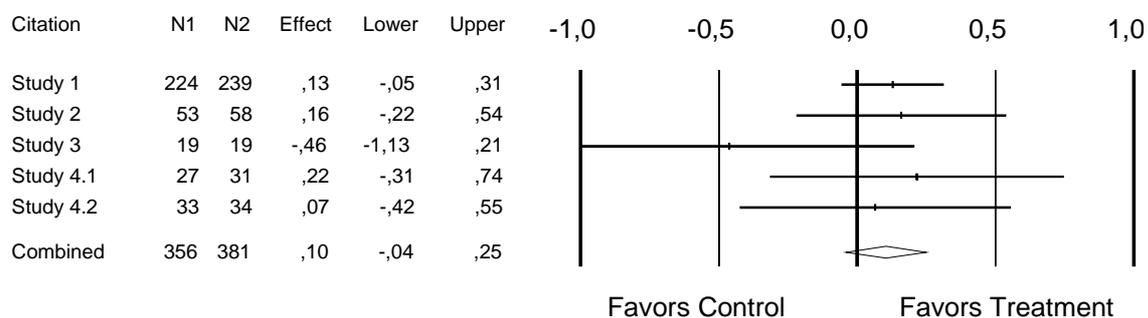


Figure 4: Individual and overall effect-size of the impact of contingent versus unconditional incentives on length of answers to open-ended questions in four WWW-studies.

4 Discussion

The meta-analytical aggregation of five experiments has revealed that incentives that are contingent upon completely filling out a questionnaire reduce the response to a study. The odds of a person responding to a study with contingent incentives are 81% of the odds of responding to a study with unconditional incentives. In other words, the odds of responding with contingent incentives are lower than the odds of responding with unconditional incentives by 19%. In terms of a standardized mean difference, this effect corresponds to $d = 0.13$. Based on the

obtained odds ratio of 0.81, Table 1 specifies response rates that can be expected for different baseline response rates, if a contingent rather than an unconditional incentive is used.

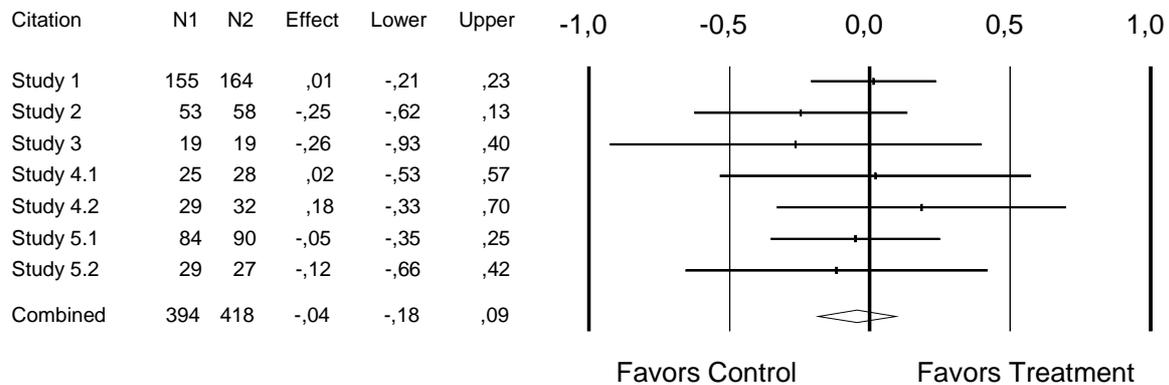


Figure 5: Individual and overall effect-size of the impact of contingent versus unconditional incentives on stereotypical answering of grid-like question batteries in five WWW-studies.

Table 1: Expected response rate based on an odds ratio of 0.81 for different baseline response rates, if a contingent rather than an unconditional incentive is used. Reading example: With a baseline response rate of 50%, a contingent incentive is expected to reduce the response rate to 44.8 %.

baseline response rate with unconditional incentive	10	20	30	40	50	60	70	80	90
expected response rate with contingent incentive	8,3	16,8	25,8	35,1	44,8	54,9	65,4	76,4	87,9

The individual experiments as well as their meta-analytical integration have failed to bring out significant effects of contingent versus unconditional incentives on retention, item-nonresponse to closed-ended questions, length of answers to open-ended questions, and stereotypical answering of grid questions. The lower response rate, yet unaffected retention and data quality with contingent incentives are in line with predictions by reactance theory: People experience the restriction of the eligibility for an incentive as a threat to their freedom *not* to answer all items in a questionnaire. The affected invitees restore their threatened freedom by not taking part in the study. Thereby, reactance affects both serious and non-serious invitees alike. Of course, the null effects on data quality and retention cannot be interpreted as a proof that selective dissuasion does not exist. In a meta-analysis with many more studies on contingent versus unconditional incentives, even a tiny tendency towards better data quality with contingent incentives might become statistically significant. Therefore, while not being able to rule out the

existence of selective dissuasion, this meta-analytical summary suggests that any such effect – if it does exist – is very small.

The reduction of the response rate through contingent incentives, which was revealed in this meta-analysis, is a small effect as well. The smallness of the effect might be due to the fact that, on the one hand, the decision to take part in a study is determined by many reasons other than receiving a contingent versus unconditional incentive, such as curiosity, altruistic motives, and the kind and amount of incentives offered for participation. On the other hand, many people who receive an invitation might just skim the e-mail and hence not notice the strings attached to a contingent incentive. Moreover, some people who receive an invitation that does not mention that an incentive is contingent might still implicitly assume that only those people who answer all the items will receive the incentive. Future in-depth interviews with invitees might throw more light on what they think and feel when making a decision to participate.

It took this meta-analytical summary to reveal the small effect of a contingent incentive on response, as all of the individual studies were underpowered to detect this effect. This effect as gained from this summary is more robust and reliable than if it was established in only one big study, because the summarized studies varied in several ways: The participants stemmed from different online panels, respondents were participating for the first time in some studies whereas in others they were participating for the second time, in some studies a reminder was sent whereas in others there was no reminder. Finally, the field time and the kind and amount of incentives employed in these studies varied as well.

Due to the small number of studies that have been summarized here, analyses of moderators potentially influencing the differences in response, retention, and data quality between contingent and unconditional incentives cannot be performed. For example, it might be possible that the value of the incentive moderates the way a contingent incentive influences response. A very attractive incentive might tone down any difference in the response rate brought about by offering this incentive contingently rather than unconditionally, whereas an unattractive incentive might intensify the effect: When offered a cheap incentive with strings attached, comparatively many invitee's might experience reactance and subsequently refuse to take part in the study. They might experience the demand to answer all the questions brazen and unjustified if only a cheap incentive is offered for compensation. Furthermore, a reminder in which the incentive information is repeated might also intensify the effect of a contingent incentive on response. Receiving the incentive information repeatedly makes it more likely that the invitee will become aware of the strings attached to the incentive. If more studies become available, a new meta-analysis needs to examine these and other possible moderating influences.

Awarding an incentive only to those participants who have answered every item in a questionnaire can have implications for incentive costs, and thus for survey costs. If the incentive is independent of the number of participants (e.g., a

prize draw where 3 times 100 EUR are raffled), the total incentive costs are the same whether a contingent or an unconditional incentive is used. However, with incentives that are awarded on a per-capita basis (e.g., each participant is paid 2 EUR), the total incentive costs are generally lower with a contingent than an unconditional incentive. The reason is that participants who skip items in the questionnaire need not be paid. Thereby, the cost savings are as high as the percentage of people who skip items. For example, if 20% of respondents fail to answer one or more items, the incentive costs are reduced by 20%. Thus, as a general rule, the higher the expected percentage of people who skip items and the more expensive the per-capita incentive, the cheaper the total incentive costs when employing contingent incentives.

However, this calculation leaves out the response rate as a point of consideration. The potential savings in total incentive costs with contingent incentives come at the cost of a decreased response rate. How much the researcher values a particular increase in response rate depends on the aims and context of a study and on available resources. For example, if a representative sample has been drawn with great effort, the aim to maximize the response rate with this survey will probably override any considerations for potentially saving a few hundred EUR for incentives. Therefore, with each survey project, researchers need to weigh the potential cost savings when using contingent incentives against the potential decrease in response (cf. Table 1).

While under particular circumstances it might be more cost-efficient to employ contingent incentives, in general, researchers are advised *not* to offer incentives as contingent on the completeness of the questionnaire. If they do, they are bound to end up with fewer respondents to their study. At the same time, the sparser data are not significantly compensated for by a superior data quality or retention. Moreover, restricting the reception of an incentive to complete participations might not be legal in some jurisdictions, especially if the incentive is a sweepstake (Reips, 2002). Furthermore, not each instance of leaving an item unanswered is a sign of carelessness on the part of the respondents. It can be quite the opposite – for example – if respondents leave out an item because the question is difficult to understand or none of the available response options are appropriate. Withholding an incentive from such participants is unjust. To conclude, the attempt to effortlessly increase data quality in WWW-studies by offering incentives as contingent on the completeness of the questionnaire needs to be regarded as failed.

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