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Personalisation in advance letters does not always increase response rates. Demographic correlates in a large scale experiment

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This study was set up to examine whether personalising advance letters by adding names and appropriate salutation, affects the survey cooperation of subgroups in the general population differently, in analogy to findings that subgroups react differently to advance letters. Differential reactions could be an explanation for the mixed findings in the literature on personalisation of advance or cover letters. In a large scale study (n = 39,518), information in communal registries was used to study (non)response patterns in subgroups, as a result of personalisation. Advance letters of the Dutch CAPI Labour Force Survey were randomly assigned to addresses. In the non-personalised version (n = 30,899), letters were addressed to "the inhabitants of...". In the personalised version (n = 8,619), the name or names of the household core were derived from municipal registries and used for addressing the letter. A re-interview addressed the issue whether the advance letter was read by more households when the household was addressed by name. By linking the sample to registries, it was possible to study response behaviour of subgroups. The study focussed on groups the literature indicates as differentially reacting to advance letters, i.e., different age, ethnic, gender, household composition and income groups, and groups with or without a listed telephone number. Hardly any difference in the overall level of cooperation was found if either a personalised or non-personalised letter was used. However, differential reactions were found for listed versus unlisted telephone owners, where only listed households reacted positively to personalisation. In the other subgroups studied, no firm evidence of differential reactions were found. The paper discusses what these results signify for sample composition and the risk of bias.
Keywords: advance letter, personalisation, response, cooperation, subgroups

1 Introduction

Advance letters have long been established as a means to heighten response rates in survey research (e.g., Yammarino, Skinner & Childers, 1991; Dillman, 2000; Goldstein & Jennings, 2002; De Leeuw, Callegaro, Hox, Korendijk, & Lensvelt-Mulders 2007). Numerous studies have tried to determine what makes a successful advance letter. Attention has been given to the wording of the letter, its length, colour, paper quality, mailing quality, signature, salutation and the usage of a survey units name (see Dillman (2000) for an overview). The last three elements, naming, salutation and signature are used to personalize advance letters. By using a sample units name in addressing the letter and in the salutation (Dear Mrs. Johnson), and by hand signing the letter, the survey organisation gives a message of personal attention to the respondent, who will react with heightened attention to the needs of the survey organisation, resulting in higher response rates. Cialdini (2001) shows that people are inclined to reply in a similar return action to certain ways of acting. In the case of a respondent who receives a personalized letter, she/he may feel that since the researcher took the time to personalize the letter she/he should take the time to participate in his/her survey.

Personalization of letters has been a subject of hundreds of studies and of numerous reviews and meta-analyses (e.g., Heberlein & Baumgarten, 1978; Goyder, 1982; Yu & Cooper, 1983; Harvey, 1987; Fox, Crask, Kim, 1988; Yammarino et al., 1991; Dillman et al., 2007; Scott & Edwards, 2006; De Leeuw et al., 2007). Results have been mixed, however. Worthen and Valcarce (1985) analyzed 26 personalization experiments and found that the results favoured personalization in 18 of the studies, but overall, the effect in favour of personalization was slight. In a subsequent study they failed to find a significant increase in response rates for personally addressed, individually typed, and hand signed letters versus mimeographed form letters with general salutations and facsimile signatures. Reviews by Harvey (1987) and Yu and Cooper (1983) found positive response effects of personalization, while quantitative meta-analyses by Yammarino et al. (1991), Heberlein and Baumgartner (1979), Goyder (1982) and Fox et al. (1988), suggest that personalization has no effect. Dillman et al. (2007) comment that personalization has been operationalized in so many different ways, and with so many different combinations of individual elements (e.g., envelope labels vs. typing of address on envelope, handwritten salutations, postscripts or entire letters,

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group salutations vs. inserted names, stationery vs. mimeographed letters, real signatures vs. stamped vs. printed, black vs. blue contrasting signatures) that it is extremely difficult to develop categories with enough studies included so that results would be meaningful. A recent meta-analysis by Scott and Edwards (2006) focussed on two aspects: including participants names on letters, and a combination of names and handwritten signatures. In fourteen randomised controlled trials the odds of response when including participants' names on letters were increased by one-fifth. When participants' names and hand-written signatures were used in combination, the effect was more substantial, with an almost 50% increased odds of response, corresponding to an absolute increase in the proportion of questionnaires returned of between 4% and 10%.

The largest body of research entails cover letters, accompanying a mail questionnaire. Far less attention is given to personalization as a means to influence response rates in interviewer mediated survey research (like telephone or face-to-face surveys), where advance letters are used. A number of studies compared the use of participants name in the letters salutation (Dillman, Gorton Gallegos & Frey 1976; Groves & Snowden, 1987; Traugott, Groves & Lepkowski, 1987). None of these studies showed any influence of this kind of personalisation on response results. A meta-analysis by De Leeuw et al. (2007) used differences between level of personalization in advance letters of 29 studies (operationalized as: individually personalized, addressed to household, or not personalized at all) to show that this kind of personalization does not influence response rates in telephone surveys. Dillman, Smyth, and Christian (2007) recommend that all communication with potential respondents be personally addressed to the recipient, although response gain is modest. However, even a modest increase in response rates could signify a substantial cut in costs if it would be followed by an equivalent reduction of sample size. So, even modest increases in response rates may be worth further examination.

What all these studies have in common, is that they do not study whether personalization affects all participants equally. The literature on advance letters shows that response rates of particular subgroups may be lowered by sending advance letters. Goldstein and Jennings (2002), using a listed sample of registered voters found that people between 18 and 29 years old were less likely to participate (17%) when they received a letter. They conclude that research should be done into the possibility that different subgroups need different letters. Likewise, Parks, Kennedy, and Hecht (1994) found that letters improve response of those people who are better responders to start with: women, whites and house owners. They state that advance letters "might actually increase differential noncooperation and produce data that are not representative of the population they are assumed to be drawn from". Camburn, Lavrakas, Battaglia, Massey, and Wright (1995) find that people with unlisted telephone numbers respond differently to advance letters.

To the extent that personalizing letters may strengthen the effect of the advance letter by heightening the chance that it is read (Couper, Mathiowetz & Singer, 1995), it is possible that differences between subgroups in response behaviour as a result of advance letters are aggravated. Helgesen, Voss and Terpening (2002) provide evidence that the first step of gaining the respondent's attention via the advance letter is highly dependent on how thoroughly the respondent usually sorts through and reads their mail. Using a name on the letter may help getting that attention.

One attempt to differentiate the effect of personalisation for specific subgroups was made by Dillman, Lesser et al. (2007). In this study, personalisation was compared in general public surveys, versus specific group surveys (like All-Terrain-Vehicle owners). It was found that of the five general public surveys, personalization treatments significantly augmented response rates in two of them. In the four specific group surveys, however, either no effect of personalisation was found, or in one case a reversal was found, where the personalised letters had a lower response than the non-personalised.

In the present study, examining differential reactions to personalisation is taken one step further: in line with research that shows that subgroups may be differentially susceptible to advance- or cover letters, we study whether subgroups in the general population react differently to personalisation. A large scale experiment (n = 39,518) was conducted, based on the Dutch Labour Force Survey, a monthly CAPI survey. The LFS uses an address sample of 7000 addresses per month. For this experiment, the address sample was linked to information in communal registries. The availability of registry information on respondents as well as nonrespondents, makes the study of response patterns in subgroups possible. The registries supplied the names of inhabitants and other relevant information, like ethnic origin, age, income and household composition. The standard LFS advance letter is addressed to "inhabitants of address, number, postal code, community name". The standard salutation is "dear sir / madam". The personalised experimental letter addressed the household core members by name, and adapted the salutation accordingly. This operationalisation is not the optimum in personalisation. Although the letter is printed on first class stationary in two colour print, the letter is not signed by hand and it has no precise date (but only the month and year), two factors research shows to be of importance (Dillman, 2000; Scott & Edwards, 2006). Dillman (2000) acknowledges however, that in large (government) surveys, the size of the samples makes optimal personalisation not realistic.

Link and Mokdad (2005) show that there are differences between subgroups in the recollection of seeing the advance letter. On average 61% of respondents remembered seeing it, but in non-white, young, low educated, and low income groups recollection could be as low as 48%. It is unclear whether "seeing the letter" is equivalent to reading it, but to the extent that the advance letter is drawn up so as to optimally help convince sample units to participate, not reading the letter could be the first step toward non-response. Couper et. al. (1995) show that in about half of the households, one person sorts the mail prior to reading, and over 60% throw away some mail without opening it. Letters addressed

to individuals who are targeted as respondents do not suffer from such problems (Groves & Couper, 1998). Addressing the letter by name may help drawing attention to the letter, and thereby possibly diminishing differences in reading behaviour between groups. However, the unit of observation in the LFS is the household. One letter is sent to address both members of the household core (if more than one is present). If one person sorts through the mail, as Couper et al. show, this may be another person than the one answering the door to the interviewer. To study whether the effect of personalisation is less in households with a two-person core, household composition is analyzed. If the named letter is indeed "depersonalized" if more than one adult is present in the household, one would expect a larger effect of personalisation in single households.

As will be described below in more detail, linking addresses to inhabitants is not always straightforward. Where addresses contain multiple households, addressing by name is not possible. Also, numerous people fail to register partnership with the community, resulting in unclear family relations. As we strived to accurately name inhabitants, we were quite conservative, which resulted in 20% records that could not unequivocally be linked to names. These unlinked records may resemble unlisted subgroups in RDD dual frame studies. Parsons, Owens, and Skogan (2002) found that the listed samples in their two studies were more likely to be white, older, and college educated, but less likely to be married than the unlisted sample. Link and Mokdad (2005) show that in RDD research, numbers that can not be linked to addresses belong primarily to racial minorities and those aged 18 to 34. They warn for the possibility of introducing bias when response stimulating measures can only be applied to part of the sample. To the extent that naming response letters does have an effect on response rates, this possibility exists in this study too, and will be addressed.

2 Method

Advance letters of the Dutch CAPI Labour Force Survey were randomly assigned to addresses. The control condition (n = 30,899) consisted of a non-personalised letter addressed to "the inhabitants of", with a standard salutation of "dear sir / madam". In the personalised experimental version (n = 8,619), the name or names of the household core were derived from municipal registries and used for addressing the letter.

The Dutch Labour Force Survey is a continuous monthly CAPI survey. Each month a sample of addresses is selected from which during the data collection households, the sampling units, are identified. The target population of the LFS consists of the non-institutionalised population aged 15 years and older, residing in the Netherlands. The sampling frame is a list of all known occupied addresses in the Netherlands, which is derived from the municipal basic registration of population data. The LFS is based on a stratified two-stage cluster design of addresses. Strata are formed by geographical regions. Municipalities are considered as primary sampling units and addresses as secondary sampling units. All households residing at an address, up to a maximum of three, are included in the sample. All persons of 15 years and older in the household are interviewed, proxy is allowed. The LFS has a rotating panel design, with a face-to-face CAPI interview as the first wave, and four subsequent CATI waves. The study reported here concerns the first CAPI wave of a number of months in the 2007 and 2008 LFS.

The sampling frame, derived from the municipal registries, contains the names of the inhabitants. This information is used by Statistics Netherlands for finding telephone numbers. These numbers are used by field interviewers as an aid in contacting sample units, but the names are not used in the fieldwork procedure. The telephone numbers are the ones that can be found by automated search in the records of the Royal Dutch telephone company (KPN), owner of the fixed landlines. Around 35% of addresses can be linked to telephone numbers by this method. By intensive personal search, numbers can be found from other providers, for an additional 25% of addresses. The other 40% either has a shielded number, or an unregistered cell phone. The intensive search is put in for CATI surveys, but for the purpose of aiding field interviewers only the automated search was performed at the time of this research. In this study, the number of households with an unlisted landline (62%) exceeds the number of listed households (38%).

For this experiment, experimental and control addresses were linked with the names of the inhabitants, their sex, age, ethnic origin, household composition, and position in the household. Age, household composition and position in the household were used to determine if persons at an address formed a household, and who was/were household core member(s): one name for singles and single parents, two names for partners. Only one letter was sent per household. Because all household members of 15 years and older are eligible, and while the household core is allowed to respond by proxy for other household members, all addressed household members are potential respondents. If more than one household appeared to live at an address, or if household composition could not be determined, a standard advance letter was sent, addressed to "the inhabitants of; address; postal code; town". 80% of addresses could thus be furnished with one or two names. Sex of the core members was used to formulate the appropriate salutation: dear sir; dear sir, dear madam; but also: dear sirs, etc. A translated advance letter is included in the appendix.

The demographic information from the municipal registries was aggregated to form household level variables: mean age of the household core, sex composition (male(s), female(s), mixed), household composition (partners, one parent/ single, undetermined) and ethnic background (native Dutch, non-western and western foreigners, and mixed). Interviewer paradata informed us whether or not a fixed landline could be determined for the address. Linking addresses with Statistics Netherlands' area statistics made available information at postal code level, like urban density and income. The analyses in this study focused on subgroups that are mentioned in literature as reacting differently to advance let-

Table 1: Response and cooperation with and without name on advance letter

	No name			Name			
	%	n	SD	%	n	SD	$\chi^2_{(1)}$
Response; all	60.6	28,995	2.9	61.5	7,994	5.4	2.08
Cooperation; all	65.9	26,662	2.9	66.1	7,439	5.5	0.08
Response; name found	61.2	23,848	3.2	62.6	7,007	5.8	4.41*
Cooperation; name found	66.0	22,114	3.2	66.7	6,574	5.8	1.15

Note. Response rate is defined as the number of complete and partial interviews with reporting units divided by the number of eligible reporting units in the sample. This is AAPOR RR2, (AAPOR, 2006). Cooperation is defined as complete and partial response of contacted eligible cases (AAPOR COOP2).
* p < .05, ** < .01, *** p < .001

ters: age groups (Goldstein & Jennings, 2002), gender and ethnicity (Parks, Kennedy & Hecht, 1994), and listed telephone numbers (Camburn et al., 1995). Parks et al. (1994) also mention homeownership. As registries of homeownership were not yet available for 2008, monthly income per postal code is used here as a approximation. In addition, household composition is studied, to shed light on the effect of naming two persons in one letter.

During five months, ten percent of the LFS sample, and during two further months half of the sample, was assigned the condition "with name". Power calculations had determined that this substantial cell filling was needed to be able to reliably distinguish the relatively small response differences expected.

The experimental condition was assigned randomly to addresses. Statistics Netherlands' interviewers send out the advance letters themselves. All interviewers had advance letters of both conditions and were therefore aware of the experimental condition of each address. Addresses in both conditions were treated according to Statistics Netherlands' uniform fieldwork strategy. This strategy prescribes that all first calls must be made during the first half of the fieldwork period, that either the first or second visit should be in the evening or on Saturday, that non-contacts should be visited six times, and that visits should be spread across times and days. Incentives are not given, neither to respondents nor to interviewers. No refusal conversion is attempted. The field interviewers are civil servants employed by Statistics Netherlands, and are monitored rigorously on adherence to these rules.

The linking of addresses with names was done one month prior to fieldwork, so some households might have moved at the time of the fieldwork. Named advance letters would in that case be forwarded to the old inhabitants, and the new inhabitants would not have received a letter. Interviewers were instructed to show the standard letter to the new inhabitants in that case, and to make a note in their fieldwork administration of the event. In spite of regular reminders of this instruction, only four mentions were made of this, two in each condition.

One to two weeks after the initial interview, a sample of respondents and non-respondents (n = 3,607) was contacted for a (re-)interview, a standard procedure for the Labour Force Survey. One of the questions asked, was whether the respondent (of the re-interview) read the advance letter. These results are used to analyse if naming letters led to better reading.

3 Results

Table 1 shows response and cooperation results for the experimental group with personalised letter ("Name"; n = 8,619) and control group with unpersonalised letter ("No name"; n = 30,899). It shows results for the entire sample (all), including those cases for which no name(s) could be determined, and results for those units for which one or more names could be determined (name found). The former results give an indication of the gain in response or cooperation that would be achieved by introducing the measure into standard fieldwork procedure; the latter results show a purer image of the effect of introducing names.

As can readily be seen, introducing names on advance letters has no general influence on response and cooperation. In the group where names can be determined, using them has a positive slight but significant influence on response, but not on cooperation.[1] The effect on response proved to be caused by a higher number of cases that were returned as unprocessed by the interviewer in the "no name" condition (1.5% vs. 0.3%, $\chi^2_{(6)} = 61.4$, p < .001).[2] As cooperation is the more obvious dependent variable in these analyses however, it will be used from here on.

3.1 Reading the advance letter

The re-interview of respondents and non-respondents shows that 85% of respondents and 83% of non-respondents (claim to) have read the advance letter. There are significant differences between subgroups in the number of persons reading the letter: respondents over 40 years of age read them more than younger respondents (81, 81, 87 and 89% for the four age groups respectively, $\chi^2_{(6)} = 29.63$, p < .001); in households

[1] Two-sided tests of significance were used, to allow for the possibility that in some groups cooperation would be lowered by personalisation.

[2] If interviewers are unable to handle their entire workload, as a result of illness or other unforeseen circumstances, they consult their regional supervisors to decide which addresses to return. This result shows that supervisors prioritized the experimental addresses.

Table 2: Cooperation with and without name by age, ethnicity, gender, income and household composition

	All				Name found			
	No name		Name		No name		Name	
	%	n	%	n	%	n	%	n
Age								
≤ 25	70.9	1,260	71.1	376	69.8	755	73.5	274
26-40	66.6	9,039	66.5	2,514	66.4	6,924	67.7	2,122
41-65	65.2	16,492	65.5	4,617	65.5	14,727	65.7	4,284
> 65	65.8	2,479	66.5	680	66.1	2,326	67.0	652
Etnicity								
Dutch-natives	67.2	22,699	67.4	6,364	67.2	19,791	67.8	585
other ethnic origin	56.0	2,583	54.1	722	55.5	1,995	54.7	598
Mixed ethnic origin (Dutch-other)	64.0	3,987	65.5	1,101	64.0	2,946	66.3	884
Gender								
Male(s)	65.0	4,641	65.5	1,267	65.1	4,151	66.5	1,165
Female(s)	63.8	5,896	63.5	164	63.5	5,411	63.9	1,532
Mixed	66.6	18,733	67.0	528	66.9	1,517	67.6	4,635
Income (€ p.m.)								
≤1600	64.1	8,418	62.7	2,280	64.0	6,538	65.0	1,883
1601-1900	64.9	6,815	65.6	1,876	64.9	5,537	65.3	1,592
1901-2300	66.8	6,646	69.6	1,773	66.8	5,497	70.1	1,558
>2300	68.6	5,771	67.2	1,599	69.2	4,762	68.9	1,401
Household composition								
Partners	67.0	14,137	67.7	4,246	67.1	14,030	67.7	4,217
Singles / single parents	64.7	9,941	64.5	2,515	64.1	7,748	64.9	2,205

Note. The majority of other ethnic origin exists of people of non-western ethnic origin (according to the Statistics Netherlands definition, these are persons originating in African, Latin-American and Asian Countries (excluding Indonesia and Japan and Turkey). A small number of people were of western ethnic origin. Although their response behaviour is somewhat different from the group of non-western ethnic origin, collapsing their results with that of the non-western group did not change results.
n = total of cooperation and non-cooperation

of non-western ethnic origin the letter is read less than in households of mixed ethnic origin and native Dutch households (86, 73 and 83% for natives, non-western and mixed households respectively, $\chi^2_{(4)} = 26.38$, $p < .001$); in single parent households the letter is read less than in either single households or households with two adults in the household core. The letter is read least in households of which composition could not be determined (86, 85, 81, and 73% for partners, singles, single parents and undetermined households, respectively, $\chi^2_{(6)} = 28.55$, $p < .001$). Fewer people living in low income neighbourhoods read the letter than people in high income neighbourhoods (83, 82, 88 and 87% for income groups < 1600, 1600-1900, 1900-2300 and > 2300 (€ p.m.), $\chi^2_{(6)} = 16.79$, $p < .01$). No differences were found between male households, female households and mixed sex households in reading behaviour.

Naming letters did not lead to a higher percentage of people reading the letter (83% of the named letter was read, versus 85% of the unnamed letter). The difference was not significant.

3.2 The effect of naming in subgroups

In order to analyse whether lack of effect of personalisation could be the result of positive effects in some groups, countered by negative effects in other groups, the reaction of different subgroups to naming of letters was studied. Table 2 shows results of naming in different age, ethnic, gender and income groups and of different household composition.

Judging from these results, the fact that no higher cooperation rates were found when letters were named, was not a resultant of differential cooperation effects in these specific groups. In general, when names could be found, cooperation rates were slightly higher when letters were named, but in neither group the difference was significant, according to Pearson's χ^2 analyses. In the ethnic groups, slightly higher cooperation rates in the named letter condition were found for the native Dutch, and the mixed group, but slightly lower rates for the people of other ethnic origin. Again, differences failed to reach significance, however. When analysing ethnicity, using COOP3 (AAPOR, 2006) is a more suitable measure. It measures cooperation of those that are contacted and able to cooperate. Nonresponse due to language problems is in this definition not considered to be non-cooperation. Using this definition, cooperation of households of non-Dutch ethnic origin was 4.1% lower when an advance letter with name was used ($\chi^2_{(2)} = 3.31$, $p = .06$). Analyses of household composition (partners, single parents, singles), and urban density showed no relation at all with naming of letters.

Another group that merits further investigation is the

Table 3: Cooperation with and without name by listed or unlisted telephone number

	All				Name found			
	No name		Name		No name		Name	
	%	n	%	n	%	n	%	n
Listed telephone number	67.4	9,738	68.6	3,811	67.6	5,853	69.2	2,438
Unlisted telephone number	65.3	16,718	63.6	3,597	63.7	8,678	63.9	1,934

group of people with unlisted landline numbers. Having a listed telephone number is highly predictive of response behaviour and even the most predictive explanatory factor for contactability as well as cooperation in a study of the Dutch Survey of Living Conditions (Bethlehem & Schouten, 2004). In the present research, the response rate in the group with the listed numbers was 64.1%, compared to 55.7% in the unlisted group. The unlisted group had a higher noncontact rate, more often language problems and a lower cooperation rate. Unlisted people react differently to advance letters (Camburn et al., 1995) and may well react differently to personalisation as well. Table 3 shows cooperation rates for named and unnamed letters, in the entire sample, and for those households where names could be determined.

A logistic regression for the entire sample with name (2), listed (2) and a Listed × Name interaction as explanatory variables again failed to show a significant effect of naming, but showed a main effect of listed telephone (Odds ratio = 1.10, $p < .001$, 95% CI 1.04-1.16) indicating that the odds ratio for cooperation is 1.10 larger in the listed group than in the unlisted group. A significant Listed × Name interaction (Odds ratio = 1.14, $p < .05$, 95% CI 1.02-1.27), showed that naming had a positive effect (+1.2%) for listed addresses, but a negative effect (-1.7%) for unlisted ones.

When analysing the addresses where names could be determined (independently of whether they were used), again a main effect of listed telephone was found (Odds ratio = 1.13, $p < .001$, 95% CI = 1.07-1.20), that was also qualified by a Name × Listed Telephone interaction (Odds ratio = 1.13, $p < .05$; 95% CI 1.03-1.27), here signifying that cooperation was higher with the named letter for the listed group, but no difference was found for the unlisted group. No significant three way interactions between naming, listed phone number and any of the other variables were found.

3.3 Who are the ones who's name can not be determined?

Differences in results between the total group, and the subgroup where names could be determined, are an indication that whether or not names can be determined, is not distributed randomly among subgroups. Indeed, highly significant differences were found in demographic make-up of the persons of whom no name can be determined, versus those with registered household composition. The persons of whom no name could be determined were far more often of foreign origin, or lived in households of mixed ethnic origin ($\chi^2_{(2)} = 739.60$, $p < .001$), were younger than 40 years of age ($\chi^2_{(3)} = 1{,}717.22$, $p < .001$), were predominantly single or, not surprisingly, lived in households of unregistered composition ($\chi^2_{(3)} = 14{,}235.86$, $p < .001$), lived in apartment flats ($\chi^2_{(1)} = 435.13$, $p < .001$) and more often in regions of high urban density than in the country ($\chi^2_{(6)} = 501.03$, $p < .01$).

4 Summary and Discussion

This study was set up to examine whether personalising advance letters by adding names and appropriate salutation, affects the survey cooperation of subgroups in the general population differently, in analogy to findings that subgroups react differently to advance letters. Differential reactions could be an explanation for the mixed findings in the literature on personalisation of advance or cover letters. Advance letters of the Dutch CAPI Labour Force Survey were randomly assigned to addresses. The control condition consisted of a non-personalised letter addressed to "the inhabitants of". In the personalised experimental version, the name or names of the household core were derived from municipal registries and used for addressing the letter. Information about the inhabitants' gender was used to formulate the appropriate salutation. A re-interview addressed the issue whether the advance letter was read by more households when the household was addressed by name. The subgroups studied were the same ones the literature indicated as differentially reacting to advance letters, i.e., different age, ethnic, gender, and income groups, and groups with or without a listed telephone number.

Results show that there was hardly any difference in the overall level of cooperation following the personalised letter. Subsequent inspection of subgroup cooperation showed that it is unlikely that lack of overall results is the resultant of differential reactions of subgroups to advance letters. In almost all age-, ethnic-, gender- and income groups, personalisation led to a small increase in cooperation, but the difference failed to reach significance. The hypothesized depersonalisation in case more than one person was addressed, was not found to be an issue; in households with a one-person core the difference between named and unnamed letters was not larger than in two-person core households. The only differential effect was found for the groups with listed versus unlisted landlines, in the sense that listed households reacted posi-

tively to personalisation, while cooperation in the unlisted households was unaffected. The higher cooperation in the group with listed phones, although significant, was slight. Inspection of the reasons people gave when refusing to participate, showed that privacy concerns were significantly more often expressed when letters were personalized.

The role of advance letters and the possible role of personalisation therein is smaller in interviewer-mediated surveys than in mail surveys, although advance letters in interviewer-mediated surveys do exert an independent influence on the outcome (Groves & Snowden, 1987). One possible explanation for the absence of an effect of naming could be the generally high response in face-to-face survey research. If the response rate is high, a ceiling effect could exist that limits the potential of the personalization treatment. The same could be caused by a survey request by a respected institution as Statistics Netherlands. Neither seems to be the case in this study, however. Not only are the response rates not that high (about 61%), but also, other interventions in the Statistics Netherlands LFS showed that response rates can be raised substantially. An experiment with unconditional incentives in the form of postal stamps, included in the advance letter, for example, showed that response rates were raised by 8 percentage points (Wetzels, Schmeets, van den Brakel & Feskens, 2008; Feskens, Hox, Schmeets & Wetzels, 2008). It is quite probable however, that the interviewer mitigates the effect of personalization. It would be worth while to study possible differential reactions to naming in mail or web surveys.

The interviewers in this experiment were not blind to the conditions. This could in principle have exerted an influence on the results. However, once the letters were sent, the information was no longer available for them, unless they made an express effort to copy the information. In the bulk of their workload, it is highly unlikely that they would remember which address was in what condition.

The results showed that the only significant difference between subgroups in the effect of naming was found for listed versus unlisted telephone numbers. However, the amount of listed numbers was relatively small. With more effort, more numbers could have been found. A part of the numbers that are classified as being unlisted, would have been classified in the other category if more effort had been made. Who is listed or not is always a question of definition of the list, and is highly dependent on the registries available for search. The group that was found in the automated search is a group bound to diminish even further in size with the higher penetration of cell phones and internet telephone. Whether this would mean that the slightly positive effect of naming in this group would disappear altogether, should be addressed in time.

The call-back survey (n = 3,607) revealed that, contrary to expectation, the named letter was not read better than the unnamed one. In both conditions about 16% of respondents and nonrespondents appear not to have read the letter. It may be that the mechanism underlying not reading is different in the two groups. In the named group, letters may have been forwarded in case of households having moved in between the drawing of the sample and the fieldwork. In the unnamed group the letter may have been discarded as bulk mail, but the net result is the same. In both conditions the letter was read very well, compared to other findings (e.g., Groves & Snowden, 1987; The Australian Bureau of Statistics, 2002).

Link and Mokdad (2005) and Couper et. al. (1995) warn of the danger of introducing bias when response stimulating measures can only be applied to part of the sample. In this study, a substantial part of the sample could not be addressed by name, either because an address consisted of multiple households, or because the family relations were unclear. These households were not spread evenly among demographic groups. On the contrary, these households were predominantly peopled with those who traditionally are under-represented in survey results as a result of low response rates: the young, the single, the highly urban, the apartment dwellers and the people of non-western ethnic origin. Had the result of the personalised letter been unequivocally positive, this circumstance would have had an influence on sample composition, with an increased potential for non-response bias. Now we find the situation that in part of the sample, the intervention has a positive effect on response, but in another part of the sample either has no effect or even a negative effect. Although the net effect of the measure neared nil in this experiment, such an outcome could still be desirable in term of bias reduction, if the stimulated part of the sample would coincide with the underrepresented part of the sample. In this case, however, it did not. Positive reactions were seen in the part of the sample that is already over-represented: the persons with a listed telephone, while negative reactions or no reactions were found in the unlisted group. In terms of response rates only, the results suggest that it could be advisable to use a differentiated fieldwork approach, in which unnamed advance letters are sent to addresses with unlisted telephones, and named letters to the listed ones. In terms of bias control, that would be unadvisable though. The results may well signify, that, even though net response did not change, the sample composition worsened as a result of addressing households by name.

Future research into the effect of response stimulating measures should be mindful of the possibility that subgroups are differentially influenced and be equally mindful of the possibility that bias is introduced by well intentioned interventions.

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Appendix: advance letter

Centraal Bureau voor de Statistiek • *Statistics Netherlands*

Control group	*Personalized letter* *Example 1*	*Example 2*
The occupants of Street, nr Postal code, City	Mrs. E.J. Jansen Street, nr Postal code, City	Mr. D.C. Pietersen and Mrs E.J. Jansen Street, nr Postal code, City

Dear sir / madam,	Dear madam,	Dear sir, dear madam,

It is my pleasure to invite you to participate in an important study of the Central Bureau of Statistics (CBS): the Labour Force Survey. This CBS research is an indispensable source of figures on labour, care tasks, education, unemployment, disability, and (pre) pensioning.

Each month, CBS draws a sample of about 5000 addresses of all Dutch addresses. This time, your address was selected. For the quality of CBS statistics, it is very important that as many selected people as possible participate in this study. So, it is very important that you should participate. You represent many other inhabitants in the Netherlands.

Shortly, a CBS employee will visit you and ask your cooperation. Our employee will ask questions about all members of your household that are 14 years of age, or older. The duration of the interview depends on the number of household members: per member we ask for about 10 à 15 minutes of your time

In all our studies, your privacy is guaranteed absolutely. Statistics are made by combining your information with that of all other participants, and with figures from other sources. On the back of this letter you can read more about that.

Should you have questions about this letter, or about CBS in general, our employee will be happy to answer these. You can also refer to our website: www.cbs.nl. It is also possible to contact the CBS contact centre in Heerlen: (045) 570 73 74. The contact centre is available from Monday to Friday between 8.00 and 17.00 hours.

I would like to thank you for your cooperation.

Yours sincerely,
Director of Fieldwork,

(printed autograph)

(name)

In the back of the letter it says:

In all our studies, your privacy is guaranteed. This is an obligation of CBS, that is put down in special legislation. To secure your data, CBS took a number of measures: CBS employees have to take an oath of secrecy, that, when breached will lead to legal proceedings. People's answers are separated from information about their names and addresses as soon as possible. Computations are made on extremely well secured computers, that are impossible to access for unauthorized personnel. The law guarantees that your data will only be used for making statistics. No institution can demand access to data that CBS collects. In CBS publications, personal information is never recognizable.

CBS does not only collect information itself, but receives data from other institutions. For example, the information in de Communal Registries, the centres for Work and Income, Social services, and the salary administration of a great number of companies. We automatically combine the information you provide, with information we receive from other sources. With this combined information, CBS makes statistics about the Dutch society. This allows us to work as economically as possible.