

Exhibit 92



Department for
Business, Energy
& Industrial Strategy



Office for Product
Safety & Standards

Insights into product recall effectiveness

Based on experimental evidence

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With credits to Stephanie Walker, Dr Kate McAtamney and Dr Avri Bilovich



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Executive summary

This report details research looking at product recall, with the aim of providing insights to support increasing the effectiveness of product recall action. This work was commissioned in response to recommendations made by Lynn Faulds Wood in her Consumer Product Recall Review, and recommendations made by the Working Group on Product Recalls and Safety, chaired by fire safety expert Neil Gibbins.

The research tested behaviourally-informed product recall messages with a consumer panel. The findings indicated that having clear instructions for what the customer had to do next in bullet points resulted in respondents indicating that they would respond to the notice quicker than the other messages. This study also identified that respondents who saw the word 'voluntary' in the recall message reported significantly less danger in the continued use of the product.

Overall, this research provides some suggestions on increasing the effectiveness of product recalls. The findings suggest that having clear, bullet-pointed instructions on what action the customer needs to take may result in a quicker response, and that if the product should no longer be used, the recall message should not include the word 'voluntary'. Additionally, letters and television may be a more effective mode of communication compared to newspapers, and there may be regional disparities in customer responses. However, there needs to be caution around these suggestions as they are based on either responses from a panel reporting what they think they would do, or information from a single product safety notification process. Therefore, further testing of these findings in an applied setting would be needed before providing definitive conclusions.

Literature review

Research indicates that only a small proportion of consumers respond to a product recall (Electrical Safety First, 2014; Ross, 2009). As a result, this report aims to identify how behavioural science might help increase the effectiveness of white goods¹ recall messages sent directly to consumers. This has been flagged as an issue to address by both Lynn Faulds Woods' Recall Review and the Working Group on Product Recalls and Safety. As there has been little research specifically about product recall, this review draws on related fields, such as warning label compliance, and more general behavioural science principles. The evidence presented below is from a review of both experimental and theoretical peer reviewed research as well as qualitative studies led by market research agencies.

The US government's 'Recall Effectiveness' review (XL Associates and Heiden Associates, 2003) identifies a framework to organise and understand product recall messages, comprising of 5 steps: initial receipt and recognition of the message, comprehension of the message, storage and recollection of instructions for compliance, evaluating the benefits and costs of compliance, and the actual compliance with the message. It is well accepted in the psychology

¹ Defined as "Large electrical goods used domestically such as refrigerators and washing machines, typically white in colour" by the online Oxford Dictionary https://en.oxforddictionaries.com/definition/white_goods (Last accessed 31.01.2017)

literature that consumers do not have the mental capacity to rationally weight every complex decision that they make, and instead often use simplifying rules of thumb (Gigerenzer & Selten, 2002). In the context of product recall, it appears that most consumers do not consciously weigh up the costs and benefits of compliance. This is exemplified by failure to comply with clear safety messages in the presence of a minor inconvenience (Dingus, Hathaway, & Hunn, 1991). The behavioural science approach to improving compliance should therefore concentrate on maximising the effect of the message and removing inconveniences in the process. The areas where this can be most impactful are the initial receipt of the recall message, comprehension (which includes recollection) and the compliance with the message.

Initial receipt of the message

There has been some research into effective modes of communication. Direct communication, such as email, has consistently been identified as a preferred and effective method of contacting most population segments (Australian Competition and Consumer Commission, 2010, p. 36; Marketing Sherpa, 2015; Wood, 2016). A meta-analysis of studies between 1997 and 2007 did note that mail surveys generated a higher response rate, whereas email surveys generated a faster response (Shih & Fan, 2009).

Research into the effectiveness of warning messages or labels provides guidelines for the creation of salient and efficient message titles, or in the case of emails, subject lines. These titles need to induce a sense of urgency and severity. The words with the highest perceived effectiveness include “Urgent”, “Recall alert” and “Danger” (Cowley & Wogalter, 2008). Additionally, warning directives such as “extremely crucial”, “urgent” and “extremely vital” are also shown to be perceived as more effective. The qualifiers “discretionary” and “compulsory” are generally less well-understood (Kim, Cowley, & Wogalter, 2007). This is mirrored in results from focus groups in which consumers thought that “‘voluntary recall’ meant that it was voluntary for people to return the product” (Australian Competition and Consumer Commission, 2010, p. 38). These studies indicate that recall notices should therefore preferably not use qualifiers such as ‘discretionary’ or ‘compulsory’, and present themselves with an appropriate and sufficiently ‘urgency-inducing’ subject line, in order to maximise the impact of the initial receipt of the message.

Comprehension and recollection of the message

Simplicity and clarity of the message have been consistently found to be highly important for consumers (Australian Competition and Consumer Commission, 2010; Wood, 2016). Indeed, additional information is not always beneficial to decision making (Keller & Staelin, 1987) and even analysts make less use of complex information compared to more simple information (Plumlee, 2003). People tend to shy away from information overload, and as a consequence they can defer decisions (Dhar, 1997). By extension, this means that consumers may also be less likely to follow instructions that are presented in a complex message. Simplification is important both for the understanding of the message, but also for compliance with the steps consumers should take. Simple, easy to follow instructions are often more successful than complex ones at being recalled and followed (Sull & Eisenhardt, 2015). Hence, the message should be clear, concise and identify a small number of easy to follow steps which are required from the recipient.

The US regulated product handbook (Office of Compliance and Field Operations and U.S. Consumer Product Safety Commission, 2013) identifies 12 considerations for information that

is required to feature in the message. In line with simplifying the message to increase understanding and compliance by the consumers, it is important to balance legally required information with a simple layout that highlights both the identification of an affected product and the steps to take. The concepts of primacy and recency effects (Furnham, 1986; Glanzer & Cunitz, 1966) state that people remember things better at the beginning and the end of a sequence. Additionally, safety message research has shown that people tend to read only the first sentence of a warning label (Friedmann, 1988). This indicates that it would be beneficial to put the most important information in the first sentence or two, which will also motivate the recipient to continue reading. Pictorial representations of warnings can also increase the recall and effectiveness of warning messages (Sojourner & Wogalter, 1997), and can therefore be used in parallel to textual explanations.

Compliance with the message

As mentioned previously, even minor inconveniences in complying with safety messages significantly decreases compliance (Dingus, Hathaway, & Hunn, 1991). The process must therefore be as easy and convenient as possible and require the least amount of effort. In addition to this, a number of behavioural nudges might be able to help in increasing consumers' compliance.

Social norms, for example can be used to motivate action by highlighting that the majority of people engage in or approve of that same behaviour (Cialdini, Reno, & Kallgren, 1990; Schultz, Nolan, Cialdini, Goldstein, & Griskevicius, 2007). This approach is even more effective when taking into account in-group effects (Goldstein, Cialdini, & Griskevicius, 2008), i.e. when consumers are told that the majority of people who are similar to them engage in the preferred behaviour. The use of social norms can also increase consumer engagement with the information presented (Harries, Rettie, Studley, Burchell, & Chambers, 2013) which is also important for the comprehension of the recall message. Hence the addition of a sentence informing consumers of a positive social norm could help increase compliance with the recall notice.

Reciprocity (Cialdini, et al., 1975) is another technique that can improve compliance. Using the reciprocity principle to induce compliance relies on providing the consumer with an unexpected gift first. For example, the Behavioural Insights Team has shown that bank staff who were asked by volunteers to donate a day's salary to charity were more likely to agree after they were given sweets (Behavioural Insights Team, 2013). Similar types of techniques could be used in product recalls, for example, affected customers could be given a gift/some kind of benefit before asking customers to take action on a recall.

Commitment can also influence the extent to which people engage or comply with a program. Commitment made in writing has been positively linked with a number of behaviours such as recycling (Wang & Katzev, 1990), reusing towels (Baca-Motes, Brown, Gneezy, Keenan, & Nelson, 2012) and survey participation (Cialdini, Wosinska, Barrett, Butner, & Gornik-Durose, 1999). A commitment can be private, in that it is not specifically broadcast to a wider audience. However, there is some evidence that making the commitment public increases the effectiveness of the intervention (Nyer & Dellande, 2010) and can be used as a stronger motivator (McCaul, Hinsz, & McCaul, 1987). The application of this principle to product recall messages could be in the framing of the desired action (such as booking a convenient time to return the recalled product) as a commitment to further public safety. Similarly, signing a pledge to engage with product recalls might further engage consumers with the recall tasks.

Personalisation of the message can also be used to increase compliance, both by making the process easier by highlighting the relevant information so that the consumer does not have to look for it (Kling, Mullainathan, Shafir, Vermeulen, & Wrobel, 2012), and attracting the attention of the message receiver e.g. by using their name. This type of nudge has been used in a range of situations such as encouraging low income students to apply to college (Castleman & Page, 2015) and increasing improving court fine payment rates (Behavioural Insights Team, 2012). Product recall messages should therefore be as personalised as possible, and if additional information (such as the model number of the product the customer purchased) is available, this should be prefilled in any required form in order to lessen the burden on the consumer.

Losses and gains can also influence people's decisions. The concept of 'loss aversion' (Tversky & Kahneman, 1991) posits that people are more receptive to losses, which loom much more strongly in their decision making process than gains of similar magnitudes. In addition the endowment effect (Knetsch, 1989) shows that people are less likely to want to part with something that they own, simply because they own it. When issuing a product recall, it is important to keep this in mind and ensure that the message is not framed as a loss of a product as this could drive up resistance to change, which is already amplified by the status quo bias, i.e. a preference for the current state of affairs (Samuelson & Zeckhauser, 1988). Additionally, increasing the salience of the potential losses incurred from not following through with the product recall actions could help encourage compliance.

Context effects

Although these psychological factors give us an indication of what might influence consumers' decision making, they should be used with care and tested within their specific contexts. Indeed, nudges can sometimes backfire resulting in unintended consequences. For example, giving people social norm messages about their energy use compared to their neighbours can backfire if they already consume less energy than their neighbours (Schultz, Nolan, Cialdini, Goldstein, & Griskevicius, 2007). This is because people are motivated to change their behaviour in line with the group, even if this means increasing energy usage. However, in this instance, including a reference to whether this level of energy use was approved or disapproved of (a smiley or sad face) meant that those with lower energy usage did not increase to meet their neighbours. Hence these nudges should be tested before they are used in the field to avoid some of these unintended consequences.

Experimental message testing

In order to provide empirical evidence for the effectiveness of product recall messages, an online experiment was designed and carried out. A sample size of 3024 respondents was selected to provide adequate power for the analysis. Participants were recruited from a panel which is designed to be representative of the UK population on key demographic factors. The experiment was coded and run by BMG research.

Description of the experiment

Product recall messages and nudges

A fictional product recall message was created based on the European template for product recalls², examples of product recall messages, and expert input from the Working Group on Product Recalls and Safety. Using principles outlined in the literature review and the suggestions from the Working Group three alternative 'nudges' were inserted into that message, resulting in 4 distinct product recall communications to be tested:

- A control message
- A message with a pictorial representation of the danger. This aimed to increase the salience of the message and clarify the meaning before reading the message in detail.
- A message that had greater clarity around the actions needed for the reader. This makes the actions more salient.
- A personalised message, which explicitly stated that this message was relevant to the reader.

These messages can be found in [Annex 1: Experimental Stimuli](#).

The task of understanding the effects of qualifying a recall as "voluntary" or not, used different stimuli than the full product recall messages described above. These were two sentence excerpts from a recall message which were identical except for the inclusion or not of the word "voluntary":

"This letter is to inform you of a voluntary, Class II recall from Bensamare- Dylan for our 2Kw electric heater. We have become aware that the device could produce small electric shocks when plugged into the mains"

Experiment description

The experiment was divided into two distinct sections. Part A tested the four different product recall messages, whereas part B compared the understanding and perceptions of shorter recall message excerpts which qualified the product recall action as voluntary or not.

After passing a small number of filtering questions, participants were shown one of the four product recall messages and were given the option to check for more information about

² [http://economie.fgov.be/en/binaries/01-Prosafe Corrective Action Guide v112011 tcm327-29772.pdf](http://economie.fgov.be/en/binaries/01-Prosafe_Corrective_Action_Guide_v112011_tcm327-29772.pdf), p30

product recalls in general, on the electrical safety first website³. The willingness to see more information, defined as asking for the link to be displayed, as well as the actual behaviour of clicking on the link and the time spent looking at the information were all measured. In the second section, participants were shown the same message again and asked a number of direct questions about their behaviour, understanding and perceptions of the messages. The questions asked about likelihood and speed of response, as well as comprehension of the message, e.g. clarity of the message, whether they have the necessary information for action. There were also questions that assessed the level of urgency generated by the message and how important it is to communicate with the manufacturer. Finally, we asked participants how they would expect to feel on receiving the message on emotions such as anxiety, happiness, and distress. This was to see if there was an emotional effect of the different nudges. Full details of the questions can be found in [Annex 2](#).

In [Part B](#) one of two short excerpts of product recall messages were displayed, identical except for the inclusion or not of the word voluntary, and again understanding and perceptions were measured. This included items such as the requirement to send back or dispose of the product, whether the company is obligated to send this message, and whether it is dangerous to keep using the product. Full details of the questions can be found in Annex 2.

The final section asked respondents about their demographic information, prior exposure to product recalls as well as their preferred methods of communication with companies issuing a recall (“Texting the company and receiving a free callback”, “Sending the company an email, and receiving a free callback”, “Using a website to enter details”, or “Calling the company using a freephone number”).

Main findings

The main findings of the experiment are divided into four parts, following the experiment itself. The first three correspond to the three sections of the experimental design while the fourth collates the additional attitudinal outcomes reported in the demographics section.

In the analysis, there were not many significant effects identified. For the significant effects that were found, the effect sizes tended to be small. This will be discussed further in the conclusions section, but the findings discussed in this section should be understood in this context.

Part A: Product recall messages

Behavioural measures

There were no significant differences between the groups regarding requesting more information about product recalls ($\chi^2(3) = 5.28, p = 0.15$), clicking on the link ($\chi^2(3) = 7.25, p = 0.06$), or the time spent looking at the webpage ($F(3, 913) = 0.18, p = 0.91$). In general, between 39% and 44% of the respondents requested more information (around 300 participants per message type) and of those between 72% and 80% then clicked on the link to look at additional information, for an average of 65 seconds.

³ <http://www.electricalsafetyfirst.org.uk/product-recalls/>

Direct measures

Participants did not show any significant differences in how likely they were to respond to each of the product recall messages ($F(3,3020) = 0.67, p = 0.57$). The sense of urgency, as measured by the amount of predicted delay in responding, did show some differences ($F(3,2946) = 4.15, p = 0.01$). The second message, which clearly states what to do next, decreases the predicted delay in responding compared to the control message (as shown by a post hoc Tukey HSD test with $p = 0.01$). This can be seen in Figure 1.

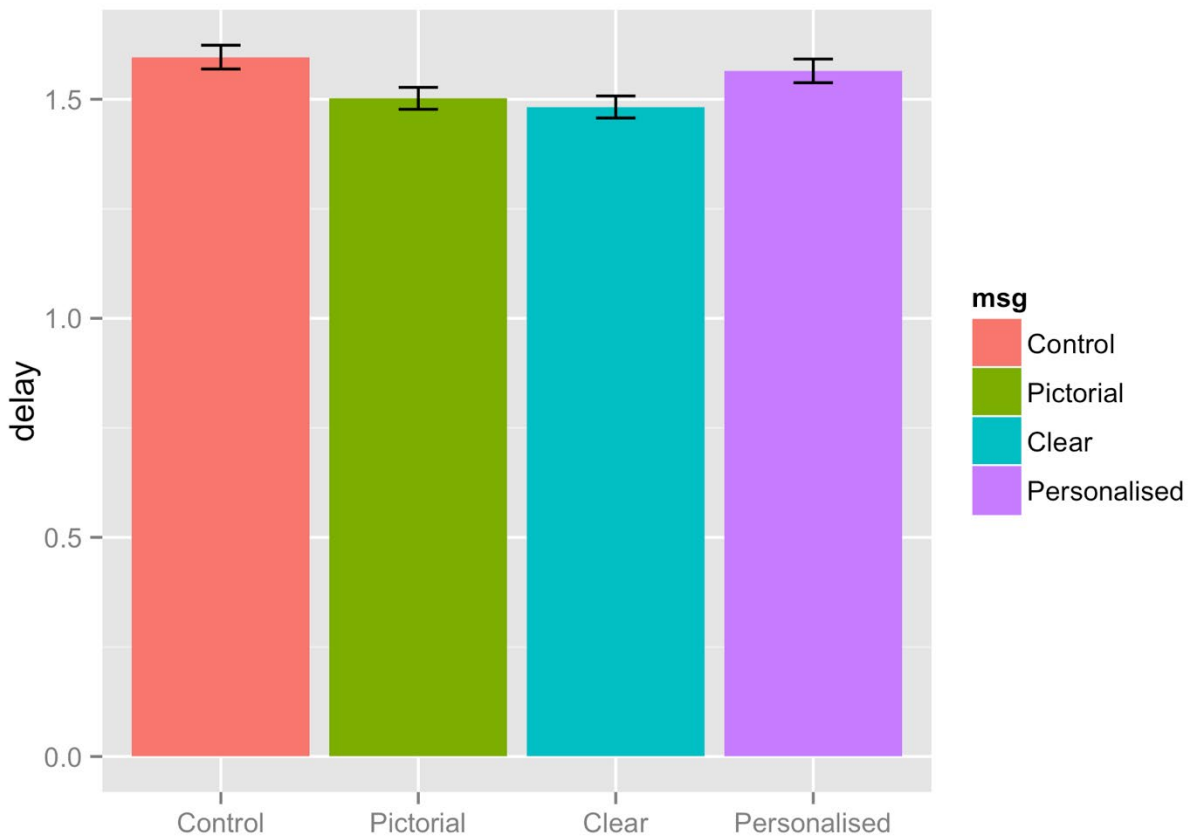


Figure 1: Mean response delay to the different product recall messages reported by participants on a Likert-type scale, reported with standard errors.

All messages were rated as fairly clear and important, while containing all the information required for action (all mean scores above 3). Although not statistically significant, the “Clear” nudge did seem to marginally improve the communication of importance and informational content (i.e. capable of action in Figure 2).

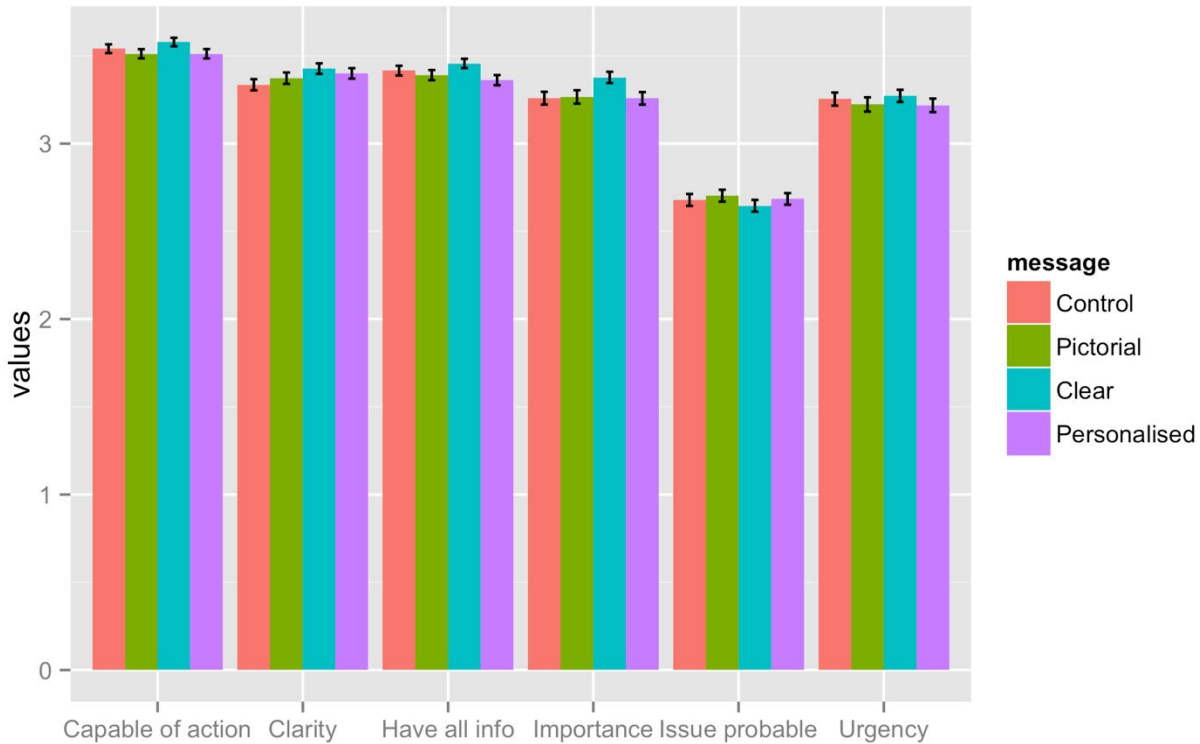


Figure 2: Mean responses and standard errors to the perception measures across the different recall messages. Note that higher values represent stronger agreement

In terms of emotional response to the messages, there were no significant differences between the groups in the amount of anxiety, concern or worry that respondents stated feeling after reading the different messages. There were significant differences between the groups for distress ($F(3,3020) = 5.14$, adjusted $p = 0.006$). Those who saw the message with the pictorial representation of the danger reported feeling more distressed (see Figure 3).

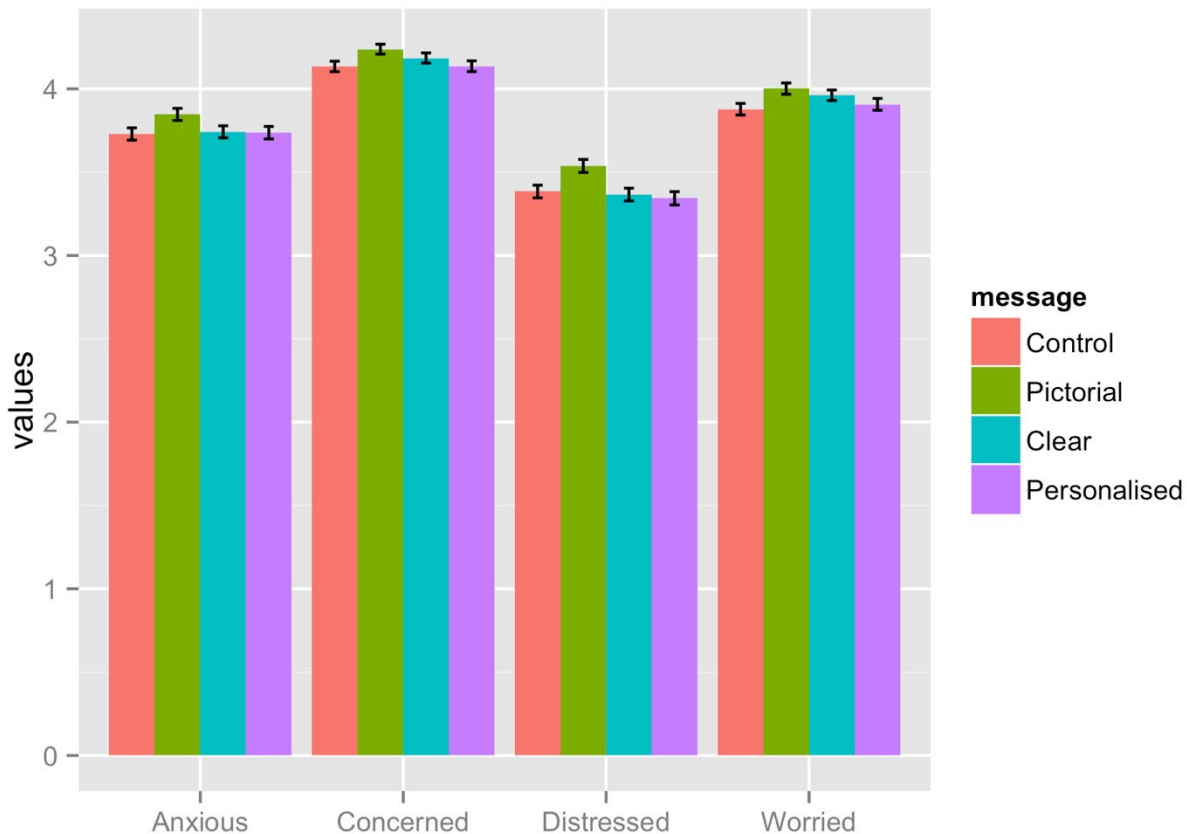


Figure 3: Mean emotional response scores and standard errors across the different messages, scored on a Likert-type scale.

Part B: Voluntary qualifier

When comparing the excerpts that did or did not include the word ‘voluntary’, there were no significant differences for understanding ($\chi^2(1) = 1.24, p = 0.27$) or requirement for action ($t(2783.98) = -1.86, \text{adjusted } p = 0.19$). Participants were as likely to understand that they are required to act in both cases, and that the company is obligated to contact them.

There was a significant difference between the two conditions regarding the perceived danger of continued use of the product ($t(2770.54) = -3.11, \text{adjusted } p = 0.01$). See Figure 4. Those who saw the excerpt framed as voluntary reported that continued usage of the product was less dangerous than those who saw the excerpt without the word ‘voluntary’ included. Similarly, participants reading the voluntary message were less likely to agree that the company was obligated to send the product recall message ($t(2765.42) = -2.64, \text{adjusted } p = 0.03$). These differences are quite small, between 0.18 (0.14 for the latter) and 0.04 (0.02 for the latter) on a 5 point scale, which indicates that the voluntary qualifier did not appear to have a substantial effect on perception of danger, but the difference was significant.

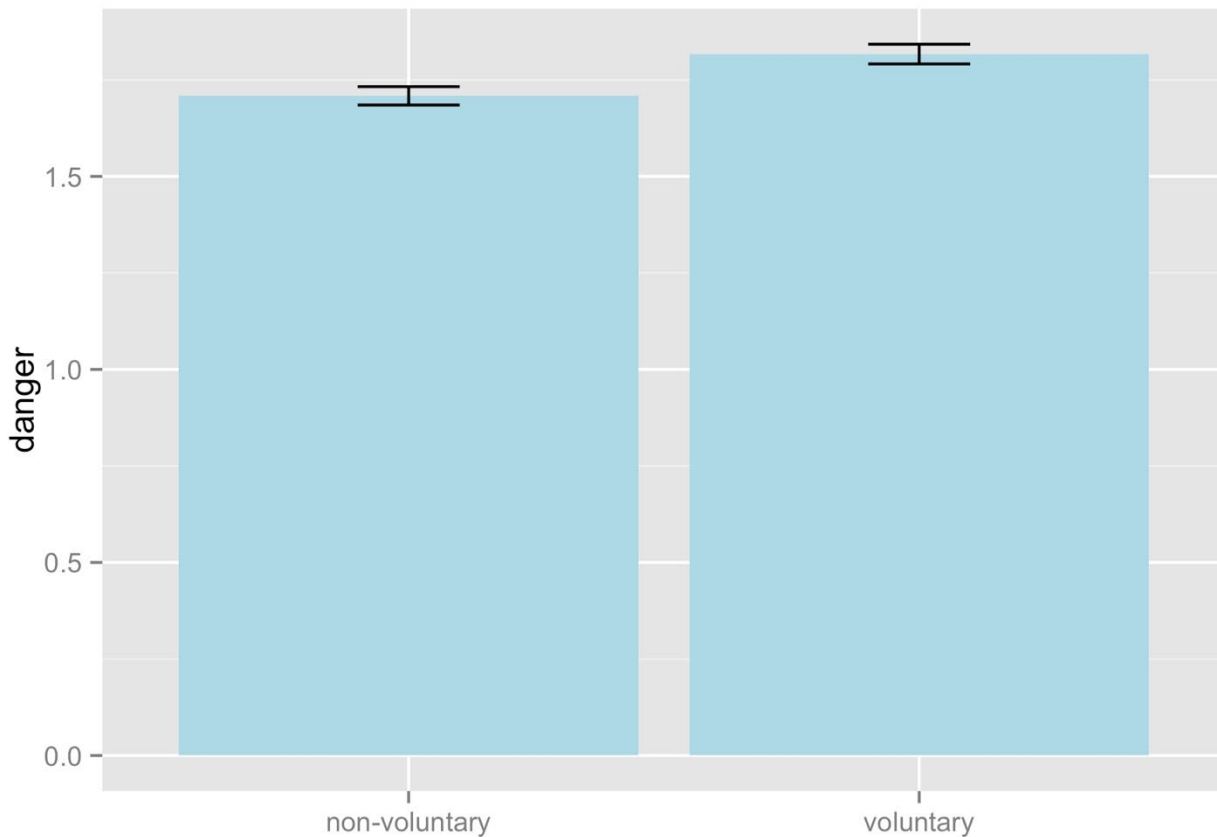


Figure 4: Mean perception of danger of continued use of the product, along with standard errors, for the two conditions.

General attitudes around product recalls

Participants rated their own likelihood in engaging with a product recall as significantly higher than others' likelihood of engaging ($t(3023) = -28.04, p < 0.001$). Overall they also reported high importance of participating in product recalls and a positive intention to participate in a product recall when receiving any type of communication.

Around 18% of respondents reported being affected by product recalls in the past. The self-reported compliance rate with white goods product recalls was 95%. There may be several reasons why this compliance rate is much higher than the average of 10-20% (Electrical Safety First, 2014; Ross, 2009). One reason for not acting on a recall may be due to not knowing about it, and so it may be that a larger proportion of people in the sample have been affected by a recall, but were not aware of it. Other reasons for this higher compliance rate may be due to the nature of the sample, in that they belong to an online panel and completed a survey concerning product recall, and so they may be more engaged in this issue. Due to the small number of those who indicated that they had been affected by product recalls in the past, we were not able to conduct any meaningful analysis comparing this group with those who reported no prior involvement with recalls.

The most preferred modes of communication with the companies which are responsible for the recalls were via free-phone and a website. See Figure 5 for a comparison of the means across the modes of communication.

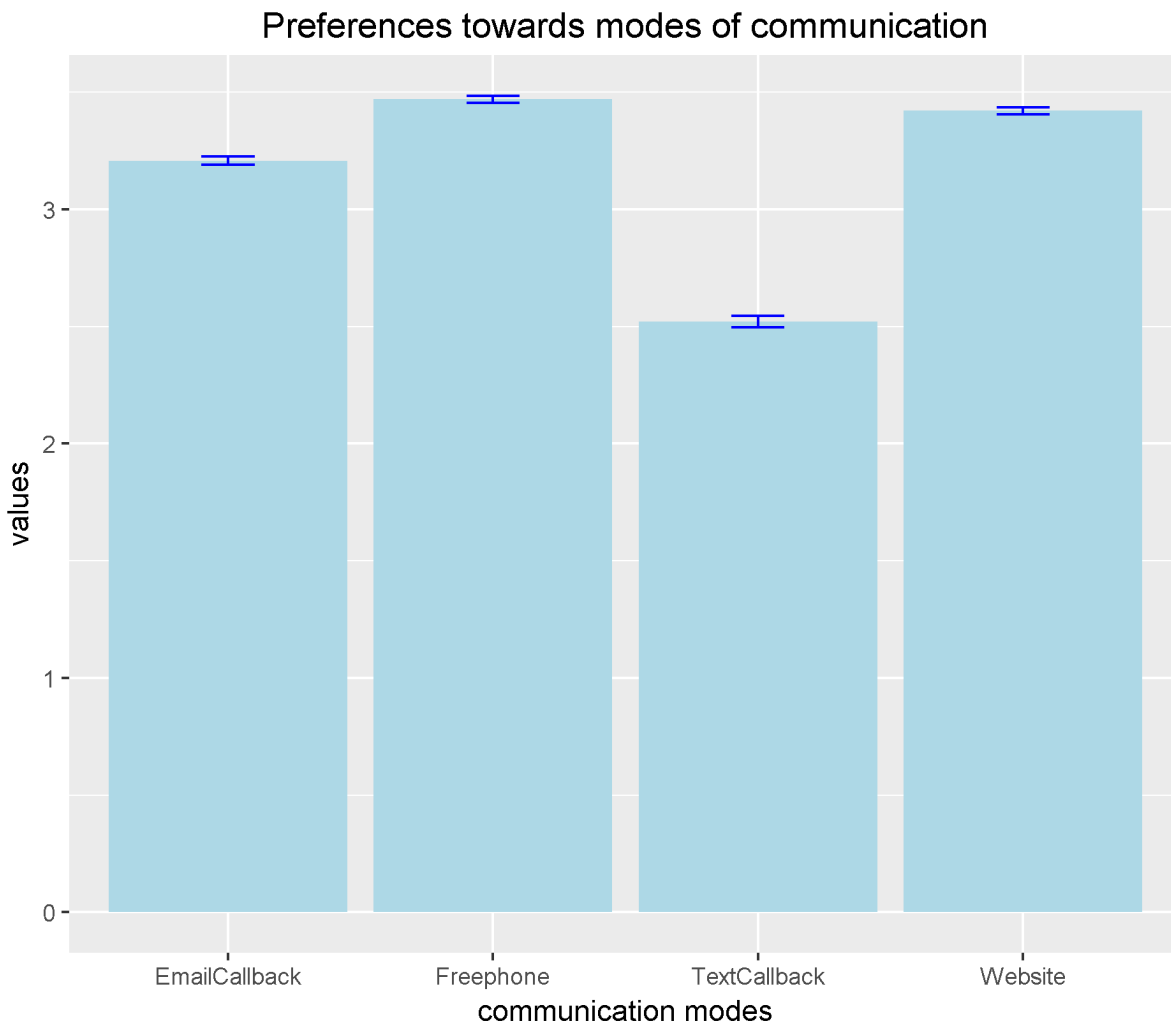


Figure 5: Mean preferences towards modes of communicating with the company issuing a product recall, reported on a 5-point Likert scale.

Summary findings and conclusions

This experiment has provided empirical quantitative evidence for the perception of product recall messages, which is a field where little such work has taken place. The findings indicate that the inclusion of a clear bullet pointed list of actions to be undertaken by the reader may result in a faster response to receiving the message. However, further testing is required to see if this type of nudge results in quicker responses in the context of an actual recall, as there is a gap between people’s intentions and their behaviours. For instance, even though people may intend to respond quicker when presented with actions in bullet points, they may not actually respond quicker if they received the message in a real recall. Therefore, this would benefit from being tested in a real world setting, in which actual behaviour can be measured.

In this experiment, the pictorial representation of the risk resulted in greater reported distress when compared with the other recall messages. However, there was no associated increase in likelihood or timeliness of response, or in the behavioural measures of looking at current product recalls. This indicates that increasing the salience of the risk can have an emotional effect, but it had little effect on intentions to respond to a product recall in this experiment. Again this finding is limited by the fact that it is an online study rather than a real life trial, and this may have a different impact in a real recall setting. For instance, in a real recall, one of the

primary challenges is for the message to get the attention of the recipient, whereas in this survey, the message already had the participant's attention. The picture may grab attention and may help communication where literacy is low or English is not the first language.

The previous findings around the misunderstandings caused by the inclusion of the word "voluntary" as a qualifier of a recall action (Australian Competition and Consumer Commission, 2010) have not been replicated here. Participants reported similar levels of understanding and requirement for action whether or not the recall was framed as voluntary. This may be due to the different samples, as previous research was conducted in Australia, or it may be due to the different methods (focus groups compared to a survey), as groups can have a desire to build consensus, which means that fringe views can be amplified and displayed as the opinion of the group. Despite the similar levels of understanding and requirement for action, the addition of the qualifier resulted in a decreased sense of danger in continued use of the product. This may have serious implications for recalls that involve a product with a serious or imminent danger with continued use. This finding would suggest that for these types of recalls, the word 'voluntary' should not be included so as not to lessen the sense of risk with continued use.

This experiment has provided some preliminary findings around the inclusion of nudges in product recall messages. However, there should be caution in interpreting the findings of this study as the experiment was an artificial situation, and so may not reflect people's actual intentions when involved in a product recall. For instance, in the experiment, participants were engaged with the process, whereas if they were to receive a recall message in 'real life' they may not be as engaged. There is also the issue of inferring behaviour from intentions or attitudes. There is a well-documented gap between intentions and behaviour (e.g. Sheeran, 2002), which was exemplified in this experiment. There was a 'ceiling effect' in responses to likelihood of responding to the product recall, which means that the majority of people reported the highest likelihood of responding to the recall, with very few stating that they would not respond. This contrasts with rates of response to product recalls in the real world, which have been reported to be between 10-20% (Electrical Safety First, 2014; Ross, 2009). So in order to see if the nudges result in different behavioural responses, these types of messages would need to be tested out in a real product recall. The next section explores some of the findings from a product safety notification campaign.

Summary and Recommendations

This report describes the findings from a messaging trial investigating product recalls and corrective action.

The product recall message testing had two key findings. Despite there being no differences between the messages on the behavioural measures, the self-report measures suggested that: having next steps for action in bullet points resulted in survey respondents reporting they would respond quicker when receiving the message; and including the word 'voluntary' in the message meant that survey respondents thought there was less risk in continued use of the affected product. These findings indicate two relatively straight-forward actions that can be taken forward and used in live product recalls and product safety campaigns.

The messaging trial had a higher level of engagement with the process than the 10-20% typical response rate (Electrical Safety First, 2014; Ross, 2009). This could mean that the results are less applicable to typical recalls and safety campaigns. In the message testing, the majority of respondents said they would be very likely to respond to a recall if they received it. This may indicate a gap between intentions and behaviour, and demonstrates the difficulty in predicting behaviour based on attitudes and intentions. This means that it is particularly useful to learn lessons from recall and corrective action campaigns in order to understand what people actually do.

Recommendations

Based on the findings from this work, there are recommendations for manufacturers and retailers on the process, safety notices, and how to improve understanding of what works:

Safety notices:

- Not to include the word 'voluntary' in product safety notices. This is particularly important if customers are required to stop using the product, as continued use may be seen as less risky.
- Put the steps customers need to take in bullet points. This may mean that customers respond quicker when receiving a notice.

In order to develop understanding of what works:

- Manufacturers and retailers to collect and analyse information on their recall and corrective action campaigns. As field testing is difficult in live campaigns, we need to make better use of the campaigns that happen. This information can be shared in order to learn best practice.

Annex 1: Experimental Stimuli

Control message:

IMPORTANT SAFETY WARNING

Washer Dryer



We have become aware that some washer dryers, sold between May 2010 and October 2012 might have a manufacturing defect and we are therefore issuing a Class II product recall.

This defect may cause an electrical component to fail and overheat, possibly leading to a fire.

If you own a washer dryer, please check the model number and serial number as shown in the diagram.

The models affected have serial numbers 35-xxxxxx-06, 35-xxxxxx-07, 35-xxxxxx-08, 35-xxxxxx-09, 35-xxxxxx-10.

If you have an affected washer dryer, please stop using it immediately. Please contact us to arrange for a free inspection and modification on Freephone 0800 XXX XXXX. When calling please have your model and serial number at hand. Alternatively, go to <http://fictcomp.co.uk/bir2ne> to enter your details.

If you have any queries please do not hesitate to contact us on Freephone 0800 XXX XXXX

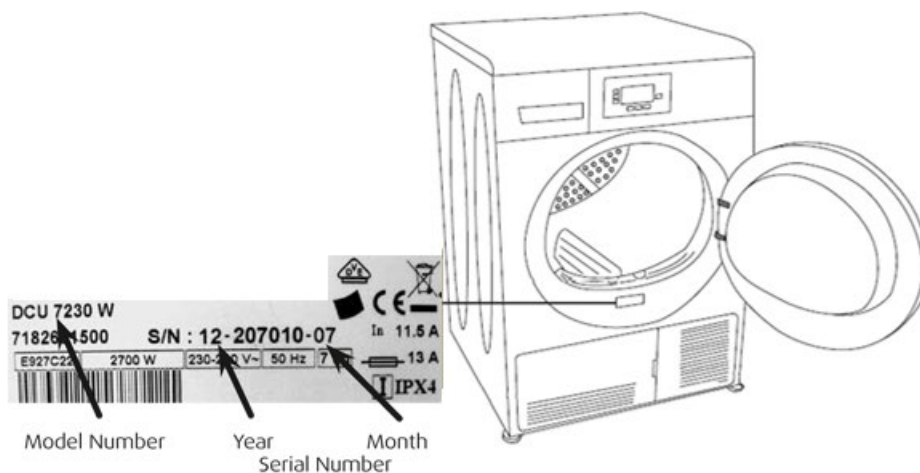
We wish to thank you for your co-operation and apologise for any inconvenience.

Company of recall
Fictional address
0800 XXX XXXX

Pictorial Nudge:

IMPORTANT SAFETY WARNING

Washer Dryer



We have become aware that some washer dryers, sold between May 2010 and October 2012 might have a manufacturing defect and we are therefore issuing a Class II product recall.

This defect may cause an electrical component to fail and overheat, possibly leading to a fire.

If you own a washer dryer, please check the model number and serial number as shown in the diagram below.

The models affected have the serial numbers 35-xxxxxx-06, 35-xxxxxx-07, 35-xxxxxx-08, 35-xxxxxx-09, 35-xxxxxx-10.

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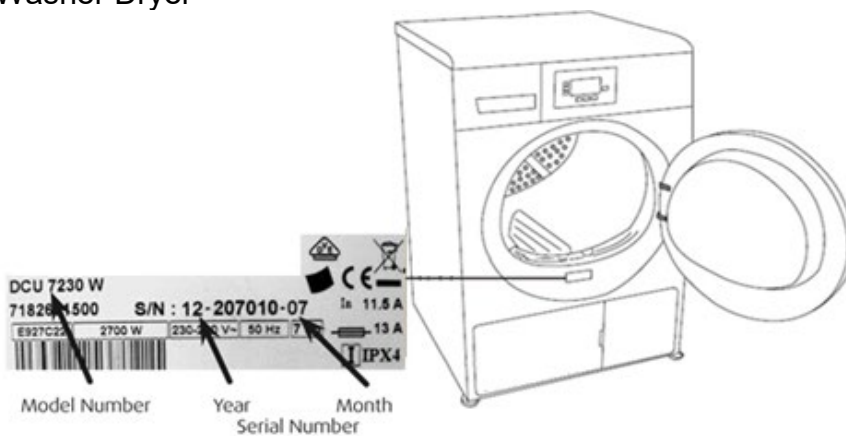
We wish to thank you for your co-operation and apologise for any inconvenience.

Company of recall
Fictional address
0800 XXX XXXX

Clarity Nudge:

IMPORTANT SAFETY WARNING

Washer Dryer



We have become aware that some washer dryers, sold between May 2010 and October 2012 might have a manufacturing defect and we are therefore issuing a Class II product recall.

This defect may cause an electrical component to fail and overheat, possibly leading to a fire.

If you own a washer dryer, please check the model number and serial number as shown in the diagram.

The models affected have serial numbers 35-xxxxxx-06, 35-xxxxxx-07, 35-xxxxxx-08, 35-xxxxxx-09, 35-xxxxxx-10.

What you should do:

If you have an affected washer dryer, please stop using it immediately.

Please contact us to arrange for a free inspection and modification on Freephone 0800 XXX XXXX. When calling please have your model and serial number at hand. Alternatively, go to

<http://fictcomp.co.uk/bir2ne> to enter your details.

If you have any queries please do not hesitate to contact us on Freephone 0800 XXX XXXX

We wish to thank you for your co-operation and apologise for any inconvenience.

Company of recall
Fictional address
0800 XXX XXXX

Personalised Nudge:

IMPORTANT SAFETY WARNING

Washer Dryer



We strongly believe you may be affected by the following product recall.

We have become aware that some washer dryers, sold between May 2010 and October 2012 might have a manufacturing defect and we are therefore issuing a Class II product recall.

This defect may cause an electrical component to fail and overheat, possibly leading to a fire.

If you own a 6kg washer dryer, please check the model number and serial number as shown in the diagram.

The models affected have serial numbers 35-xxxxxx-06, 35-xxxxxx-07, 35-xxxxxx-08, 35-xxxxxx-09, 35-xxxxxx-10.

If you have an affected washer dryer, please stop using it immediately. Please contact us to arrange for a free inspection and modification on Freephone 0800 XXX XXXX. When calling please have your model and serial number at hand. Alternatively, go to <http://fictcomp.co.uk/bir2ne> to enter your details.

If you have any queries please do not hesitate to contact us on Freephone 0800 XXX XXXX

We wish to thank you for your co-operation and apologise for any inconvenience.

Company of recall
Fictional address
0800 XXX XXXX

Annex 2: Experimental questions

Part A

- Imagine that you have received the recall message about your washer-dryer, how likely do you think you are to respond? [5 points: Extremely likely to Extremely unlikely]
- How quickly do you think you would respond? [Within one day, Within one week, Within one month, Longer, Not respond to message or forget about it]
- How likely do you think it is that someone else would respond to such a message? [5 points: Extremely likely to Extremely unlikely]
- The product recall message concerns which of the following products? [attention measuring question: Washing machine, Refrigerator, Tumble Dryer, Car, Washer-dryer, Cooker, Electric heater]
- How clear do you think the product recall message is ? [5 points: Extremely clear to Extremely unclear]
- After reading the recall message, to what extent would you agree or disagree that you have all the information necessary to take the required action? [5 points: Strongly agree to Strongly disagree]
- After reading the recall message, to what extent would you agree or disagree that you are capable of taking the required action? [5 points: Strongly agree to Strongly disagree]
- Based on the recall message, how important do you think it is to communicate with the manufacturer? [5 points from Extremely important to Not at all important]
- To what extent do you agree or disagree that taking action on the message sounds urgent? [5 points: Strongly agree to Strongly disagree]
- Given the product recall message, how likely do you think it is that this type of appliance would develop the issue described in the message? [5 points: Extremely likely to Extremely unlikely]
- Imagining that you own the product affected by the recall, how would that message make you feel? [5 point matrix question rated on the following dimensions: Not at all Anxious – Very Anxious, Not at all Sad – Very Sad, Not at all Concerned – Very Concerned, Not at all Happy – Very Happy, Not at all Distressed – Very Distressed and, Not at all Worried – Very Worried]

Part B

- Based on your understanding of the recall message, and assuming you own an affected product, please state how much you agree or disagree with the following statements: [5 points: Strongly agree to Strongly disagree]
- I am required to send back or dispose of the product

- The company is obligated to send me this message
- It is dangerous to keep using the product
- If I received this message I believe I would send the product back
- It is very important that I send my product back as soon as possible

Bibliography

Australian Competition and Consumer Commission. (2010). Review of the Australian product safety recall system. Canberra: Australian Competition and Consumer Commission.

Baca-Motes, K., Brown, A., Gneezy, A., Keenan, E. A., & Nelson, L. D. (2012). Commitment and Behavior Change: Evidence from the Field. *Journal of consumer research*, 39(5).

Behavioural Insights Team. (2012). Test, Learn, Adapt: Developing Public Policy with Randomised Controlled Trials. Cabinet Office.

Behavioural Insights Team. (2013). Applying behavioural insights to charitable giving. Cabinet Office.

Castleman, B. L., & Page, L. C. (2015). Summer nudging: Can personalized text messages and peer mentor outreach increase college going among low-income high school graduates? *Journal of Economic Behavior & Organization*, 115, 144-160.

Cialdini, R. B., Cacioppo, J. T., Bassett, R., & Miller, J. A. (1978). Low-ball procedure for producing compliance: commitment then cost. *Journal of personality and Social Psychology*, 36(5), 463.

Cialdini, R. B., Reno, R. R., & Kallgren, C. A. (1990). A focus theory of normative conduct: Recycling the concept of norms to reduce littering in public places. *Journal of personality and social psychology*, 58(6), 1015.

Cialdini, R. B., Vincent, J. E., Lewis, S. K., Catalan, J., Wheeler, D., & Darby, B. L. (1975). Reciprocal concessions procedure for inducing compliance: The door-in-the-face technique. *Journal of personality and Social Psychology*, 31(2), 206.

Cialdini, R., Wosinska, W., Barrett, D., Butner, J., & Gornik-Durose, M. (1999). Compliance with a request in two cultures: The differential influence of social proof and commitment/consistency on collectivists and individualists. *Personality and Social Psychology Bulletin*, 25(10), 1242-1253.

Cowley, J. A., & Wogalter, M. S. (2008). Analysis of Terms Comprising Potential Names for a Recall Notification Campaign. In *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*. 52, pp. 1698-1702. Sage Publications.

Department for Business, Innovation & Skills. (2016). The Government response to the Independent Recall Review by Lynn Faulds Wood. London: UK Government.

Dhar, R. (1997). Context and task effects on choice deferral. *Marketing Letters*, 8(1), 119-130.

Dingus, T. A., Hathaway, J. A., & Hunn, B. P. (1991). A Most Critical Warning Variable: Two Demonstrations of the Powerful Effects of Cost on Warning Compliance. *Proceedings of the Human Factors Society 35th Annual Meeting*, (pp. 1034-1038).

Electrical Safety First. (2014). Consumer Voices on Product Recall. London.

- Friedmann, K. (1988). The Effect of Adding Symbols to Written Warning Labels on User Behavior and Recall. *Human Factors*, 30(4), 507-515.
- Furnham, A. (1986). The Robustness of the Recency Effect: Studies Using Legal Evidence. *The Journal of General Psychology*, 113(4), 351-357.
- Gigerenzer, G., & Selten, R. (2002). *Bounded rationality: The adaptive toolbox*. MIT Press.
- Glanzer, M., & Cunitz, A. R. (1966). Two storage mechanisms in free recall. *Journal of Verbal Learning and Verbal Behaviour*, 5(4), 351-360.
- Goldstein, N. J., Cialdini, R. B., & Griskevicius, V. (2008). A room with a viewpoint: Using social norms to motivate environmental conservation in hotels. *Journal of consumer research*, 35(3), 472-482.
- Harries, T., Rettie, R., Studley, M., Burchell, K., & Chambers, S. (2013). Is social norms marketing effective? *European Journal of Marketing*, 47(9), 1458-1475.
- Keller, K. L., & Staelin, R. (1987). Effects of quality and quantity of information on decision effectiveness. *Journal of consumer research*, 14(2), 200-213.
- Kim, S., Cowley, J., & Wogalter, M. S. (2007). Emphasis terms for warning directives on compliance intent. *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*. 51, pp. 569-573. Los Angeles, CA: Sage Publications.
- Kling, J. R., Mullainathan, S., Shafir, E., Vermeulen, L. C., & Wrobel, M. V. (2012). Comparison Friction: Experimental Evidence from Medicare Drug Plans. *The Quarterly Journal of Economics*, 127(1), 199-235.
- Knetsch, J. L. (1989). The endowment effect and evidence of nonreversible indifference curves. *The American Economic Review*, 79(5), 1277-1284.
- Marketing Sherpa. (2015, 02). *Marketing Research Chart: How do customers want to communicate?* (Marketing Sherpa) Retrieved 02 01, 2017, from <https://www.marketingsherpa.com/article/case-study/customer-communication-by-channel>
- McCaul, K. D., Hinsz, V. B., & McCaul, H. E. (1987). The effects of commitment to performance goals on effort. *Journal of Applied Social Psychology*, 17, 437-451.
- Nyer, P., & Dellande, S. (2010). Public commitment as a motivator for weight loss. *Psychology & Marketing*, 27(1), 1-12.
- Office of Compliance and Field Operations and U.S. Consumer Product Safety Commission. (2013). *The Regulated Products Handbook*. U.S. Consumer Product Safety Commission.
- Plumlee, M. A. (2003). The effect of information complexity on analysts' use of that information. *The Accounting Review*, 78(1), 275-296.
- Ross, K. (2009). *Recall Effectiveness: A Hot Topic*. Product Liability Committee Newsletter

- Samuelson, W., & Zeckhauser, R. (1988). Status quo bias in decision making. *Journal of risk and uncertainty*, 1(1), 7-59.
- Schultz, P. W., Nolan, J. M., Cialdini, R. B., Goldstein, N. J., & Griskevicius, V. (2007). The constructive, destructive, and reconstructive power of social norms. *Psychological Science*, 18(5), 429-434.
- Sheeran, P. (2002). Intention—behavior relations: A conceptual and empirical review. *European review of social psychology*, 12(1), 1-36.
- Shih, T.-H., & Fan, X. (2009). Comparing response rates in e-mail and paper surveys: A meta-analysis. *Educational Research Review*, 4, 26-40.
- Sojourner, R. J., & Wogalter, M. S. (1997). The Influence of Pictorials on Evaluations of Prescription Medication Instructions . *Therapeutic Innovation & Regulatory Science*, 31(3), 963-972.
- Sull, D., & Eisenhardt, K. M. (2015). *Simple Rules: How to Thrive in a Complex World*. Houghton Mifflin.
- Tversky, A., & Kahneman, D. (1991). Loss aversion in riskless choice: A reference-dependent model. *The quarterly journal of economics*, 106(4), 1039-1061.
- Wang, T., & Katzev, R. (1990). Group commitment and resource conservation: two field experiments on promoting recycling. *Journal of Applied Social Psychology*, 20, 265-275.
- Wood, L. F. (2016). *Uk consumer product recall: An independent review*. Department of Business Innovation and Skills.
- XL Associates and Heiden Associates. (2003). *Recall Effectiveness Research: A Review And Summary Of The Literature On Consumer Motivation And Behavior*. U.S. Consumer Product Safety Commission.

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