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"Top 10" reasons: When adding persuasive arguments reduces persuasion

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Abstract Across four studies, we show that experts' efforts to strengthen the persuasiveness of health and civic duty-related appeals actually weakened them. When designing "Top 10" reasons lists to get people to quit smoking, encourage young people to vote, and persuade individuals to engage in fitness, governmental (studies 1–2) and non-profit (study 3) agencies chose to include mildly strong reasons alongside strong ones in their effort to be as persuasive as possible. However, from the target audience's perspective, those mildly favorable reasons actually decreased the persuasiveness of the message compared to a condition in which fewer but only highly persuasive reasons were used. Building upon the Presenter's Paradox by Weaver, Garcia & Schwarz (Journal of Consumer Research 39 (3):445–460, 2012), these results demonstrate that averaging in impression formation occurs not only in targets commonly thought of as unified entities such as consumer products and people but also occurs in persuasion contexts where the individual arguments comprising a message are independent of each other.

Keywords Presenter's Paradox · Averaging and adding · Self/other differences · Persuasive arguments

1 Introduction

Whether trying to get people to quit smoking, exercise more often, or simply get out to vote, public service announcements (PSAs) genuinely attempt to promote societal well-being. One pervasive strategy is the use of "top 10" reasons campaigns to change a

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certain behavior. For instance, the National Institute of Health (NIH) website currently includes a "Top 10 Reasons to Quit Smoking" PSA that lists, among others, the following reasons: "(1) I will reduce my chances of a heart attack; (2) I will reduce my chances of getting lung cancer, emphysema, and other lung diseases; and (3) I will have better smelling clothes, hair, breath, home, and car." Because such top 10 lists are generally exhaustive, they inevitably include both strong and mildly strong reasons to change behavior. In this report, we question whether policymakers who design such PSAs actually help or hurt the cause.

That is, does including less strong, but still relevant reasons to engage in a behavior—e.g., quitting smoking will give me better smelling clothes—in addition to stronger reasons—e.g., quitting smoking will reduce my chances of a heart attack—enhance the persuasiveness of a message by increasing the total sum of reasons to engage in it? Or does including less strong arguments actually diminish persuasion by lowering the average persuasiveness of each individual reason in the message as a whole? Importantly, are there differences in how a person taking the perspective of a policymaker designing a PSA versus a recipient of that message will answer these questions?

2 Background: the Presenter's Paradox

This question builds on past work on the Presenter's Paradox (Weaver et al. 2012), which shows that when people present information, they tend to use a strategy that resembles "adding" (more is better), but that when people evaluate that same information, they tend to use a process that resembles averaging (less is more). For instance, while presenters designing a scholarship thought that adding a $15 voucher for books to a $1,750 tuition credit would *increase* recipients' perceptions of a scholarship's generosity, recipients actually evaluated the $1,750 tuition credit+$15 books package as significantly *less* generous than recipients evaluating the $1,750 tuition credit alone. In building on this past work in the context of PSAs, the current paper offers two main contributions. First, while the original studies investigating the Presenter's Paradox focused on consumer products only, the current paper extends the phenomenon to the domain of attitudes and persuasion, a forum that is qualitatively different in several theoretically important ways from the processes by which consumers form impressions of products. Second, the current studies examine the Presenter's Paradox in natural settings using real-world PSAs that have been created by actual policymakers. They thus provide an opportunity to assess whether the Presenter's Paradox occurs in real-world settings.

3 Does the Presenter's Paradox Apply to Reasons?

While there are some superficial similarities between people's evaluations of "Top 10 Reasons" PSAs containing strong and less strong arguments and their evaluations of a consumer product containing highly and mildly favorable product features (Gaeth et al. 1990; Troutman and Shanteau 1977; Weaver et al. 2012; Yadav 1994) or their impressions of other people based on highly and mildly favorable trait information (Anderson 1965, 1968; see Eagly and Chaiken 1993 for a review), there are several

reasons why these types of judgments may differ. First, past work on averaging in impression formation has largely been limited to targets that are naturally perceived of as unified entities, such as other people and consumer products. If perceivers are naturally inclined to impose "structure" or coherence on such targets, they may be naturally inclined to view the features that comprise such targets as interacting with each other (Asch 1952). In stipulating that the weights of each feature must sum to one, the averaging model of impression formation presupposes just such an interaction between a target's features (Anderson 1965). Additive models, on the other hand, do not presuppose interactions among features, assuming instead that the effect of any one feature or component is independent of the others. It is possible that averaging is more likely when targets are perceived to be unified and coherent entities such as products and people, but that different processes will arise in persuasive settings utilizing strong and less strong arguments. That is, while learning about one product feature may affect our thoughts about the others in an emergent manner—for instance, learning that a shirt is manufactured in China may affect our perception of its quality—the reasons expressed in a persuasive message such as a PSA would seem to be independent of each other in a way that the features of a product or a person are not. For instance, whether smoking causes one's car to smell should not (and does not) have any bearing on whether it also causes lung cancer. Thus, whether adding or averaging will occur in this context is an open empirical question.

One of the most developed perspectives on the issue of strong versus weak arguments, namely the Elaboration Likelihood Model, also does not explicitly address this question. While some work under this model has looked at how the quality versus quantity of persuasive arguments affects persuasion, this work has focused exclusively on strong and "specious" (false or misleading) arguments rather than strong and mildly strong ones. For instance, in one demonstration, students read three strong arguments—"The National Accrediting Board of Higher Education would give the University its highest rating if [comprehensive] exams were instituted"—or nine specious arguments—"Requiring graduate students but not undergraduates to take comprehensive exams is analogous to racial discrimination"—in favor of adopting a comprehensive examination policy at their university (Petty and Cacioppo 1984). Results showed that when the students were highly involved in the issue (e.g., the exams would be instituted next year), they were more persuaded by three strong arguments than by nine specious ones. In contrast, when the students did not feel personally involved in the issue (e.g., the policy change would happen 10 years later), they relied on the number of arguments as a heuristic cue, showing more persuasion after nine specious arguments than after three strong ones. A few studies using the strong and specious argument paradigm have additionally shown that three strong arguments alone are sometimes more persuasive than those same three strong arguments plus three specious ones (Friedrich et al. 1996; Petty and Cacioppo 1984, pilot study).

While this work is consistent with the possibility that the arguments in a message may interact with each other like the features of more "unified" targets such as people and products do, there are two reasons why the focus on specious arguments does not provide a clear answer to our current context of interest. Specifically, from the presenter's perspective, it seems unlikely that a presenter would ever include a specious or false argument in a PSA. That is, while designers of PSAs may believe that relevant but less strong arguments (e.g., *smoking will reduce my morning cough*, *exercise will*

improve eye-hand coordination) may help or at least would not hurt in persuading people that smoking is unhealthy or exercise is healthy, it seems unlikely that a policymaker designing a PSA in a reputable organization would think that including a *specious* or false argument would have persuasive appeal. Second, the psychological mechanism through which specious arguments may have their effect on persuasion may not be easily transferrable to the context of mildly strong arguments. For instance, a perceiver hearing a source express a specious argument (e.g., *Requiring graduate students but not undergraduates to take comprehensive exams is analogous to racial discrimination*) may infer that the source is unreliable and unintelligent. This may quite logically lead that perceiver to question all other arguments from that source. Thus, what would ordinarily be a strong argument—*The National Accrediting Board of Higher Education would give the University its highest rating if the exams were instituted*—may be reduced in potency to "That guy doesn't know what he is talking about, he is probably wrong on that too." Again, this explanation would not apply to the types of mildly favorable arguments that presenters may include in PSAs.

Thus, it remains an open question whether mildly favorable arguments, those that are relevant but somewhat less strong than the best and strongest arguments for a case, will reduce persuasion relative to a condition where a smaller number of only the strongest arguments are presented.

4 Overview

To address this question, we selected real-world top 10 PSAs that chose to include both mildly favorable and strongly favorable arguments in their lists. We then examined whether the designers' instincts in the realm of persuasive arguments succumbed to the Presenter's Paradox or whether, in the realm of arguments, marketing designers were correct and the Presenter's Paradox does not apply. To test this, we presented participants with one of two versions of each PSA, either the original version that included the combination of strong and mildly strong reasons or a version that we created that contained only the strongest reasons from the original list. Study 1 examined a campaign of the NIH intended to encourage people to quit smoking. Study 2 examined a top 10 campaign from a governmental election center that was designed to encourage young people to vote in the 2012 presidential election, and study 3 examined whether a "Top 10 Reasons to Exercise" campaign promoted on a frequently visited medical advice website increased or decreased people's tendency to exercise relative to a persuasive message we designed that used only the strongest arguments from the original list. Finally, study 4 was similar to studies 1–3 except that we also asked a separate group of participants to take the "presenter's role" to make a decision about whether a PSA would be more persuasive if it included the top 10 reasons or only the "top 1" reason.

5 Study 1: NIH and smoking

We expected that people would be *less* inclined to quit smoking after reading the NIH's *10 reasons* campaign (NHLBI 2013a) than after reading our truncated *two reasons* campaign.

5.1 Participants and procedure

Staff members at a large, public university received a survey solicitation via e-mail. After seeing either the original top 10 reasons campaign or our two reasons campaign that used only the two strongest reasons from the original campaign, participants were asked, "How serious are these consequences of smoking to you?" (1=not at all serious, 7=very serious); "In light of these consequences, how risky is it to smoke?" (1=not at all risky, 7=very risky); "If you currently smoke, to what extent are you inclined to quit smoking?" (1=not at all inclined, 7=very inclined), as well as indicated demographic information. Rated seriousness and riskiness were combined into a *severity* composite (α=0.95). Our focal sample, consisting of 34 self-identified current smokers, had an average age of 50, average years smoked of 21.8, and average daily cigarette intake of 14.4[1].

5.2 Results and discussion

Participants inferred that the consequences of smoking were more severe (M=6.39, SD=1.02) and expressed a greater personal inclination to quit (M=5.36, SD=1.15) after seeing our two reasons campaign than after seeing the original 10 reasons one ($M_{severity}$= 4.80, SD=2.17; M_{quit}=3.90, SD=2.29), $F(1, 32)=6.51$, $p<.05$; $F(1, 32)=4.78$, $p<.05$, respectively. By showing that presenting the two most serious consequences in a message by themselves was more persuasive than presenting those same two consequences along with eight relevant, but less strong, ones, study 1 provides initial evidence that real policymakers can also fall prey to the Presenter's Paradox. In a follow up analysis, we additionally asked a separate group of 34 participants, "Imagine your job was to come up with a campaign to persuade as many people as possible to quit smoking," and showed the top 10 and top 2 versions of the campaign. Just like the real policymakers, these participants also thought the top 10 list would be more effective in persuading the target audience, as 88 % made this recommendation (χ^2=19.9, N=34, $p<.001$).

In short, people were less likely to express an intention to quit smoking when they saw the combination of mildly strong and very strong reasons to quit than when they saw the strong reasons alone. While past work suggests that strong antismoking arguments cause greater physiological reactions in smokers than weak ones (Strasser et al. 2009), study 1 moves beyond this work to show that strong arguments *in the context* of weaker ones become less persuasive through the averaging effect. In demonstrating this effect, study 1 provides initial evidence consistent with the idea that evaluators may use averaging processes even in the case of persuasive arguments, a context where the "features" of a message (i.e., the individual arguments comprising it) do not at first glance seem to be as susceptible to an "interaction" process as the individual features that comprise targets that we ordinarily perceive to be more unified like products and people.

[1] After reading the experimental materials and responding to the key dependent variables, participants rated the seriousness of each of the 10 reasons to quit smoking on seven-point Likert scales (1=not at all serious, 7= very serious) one at a time in a random order. As predicted, participants rated the two arguments from our "strong" arguments two reasons condition to be more serious ($M_{Strong\_Reasons}$=6.61, SD=1.12) than the eight arguments we had deemed to be less strong ($M_{Weak\_Reasons}$=5.79, SD=1.37), t (139)=9.48, $p<.001$.

6 Study 2: get out to vote

Young voter turnout is a current concern in the USA. Less than half of the citizens under 30 who were eligible to vote did so in 2012 (Camia 2012). We examined whether a "Top 10 Reasons for Young People to Vote" PSA put forth by the Douglas County, NV, Election Center helped or hurt the cause (Douglas County Election Center 2012). We expected that people would be *less* inclined to vote after reading the Election Center's 10 Reasons campaign containing a mixture of highly strong and mildly strong reasons to vote than after reading our truncated *three reasons* campaign.

6.1 Participants and procedure

One hundred and seven students completed a survey after being randomly e-mailed from the directory of a large public university (response rate of ~7 %, factoring in bounce backs). After seeing either the original top 10 campaign that included a combination of very strong and mildly strong arguments (e.g., very strong: *Young people have the most to gain and lose in any election because they have to live the with consequences longer than anyone else*; mildly strong: *With the internet it takes about a minute to get all the registration and voter information for your state and county*) or our modified three reasons PSA containing the three strongest arguments only, participants were asked: "How important is it to vote?" (1=not at all important, 7=very important) and "How likely are you to vote in the next election?" (1=not at all likely, 7=very likely)[2].

6.2 Results and discussion

Results were consistent with those of study 1. Participants ascribed greater importance to voting (M=6.20, SD=1.01) and expressed stronger personal voting intentions (M=6.25, SD=1.46) after seeing our three reasons PSA than after seeing the original 10 reasons one ($M_{\text{importance}}$=5.48, SD=1.95; $M_{\text{intention}}$=5.54, SD=2.16), $F(1, 105)=5.86$, $p<.05$, $F(1, 105)=4.07$, $p<.05$, respectively.

While the intent of the campaign designer was obviously to increase voter turnout as much as possible, these results suggest that young people seeing the original campaign were actually less likely to vote than they would have been had the designer of the PSA included the strongest arguments for voting only.

7 Study 3: top 10 reasons to exercise

In study 3, we examined whether individual differences in need for cognition (NFC) would moderate the effect. If participants who are high in need for cognition read the arguments in a persuasive message more closely, then they may exhibit the averaging

[2] An outside group of observers judged the 10 reasons used in the original top 10 campaign one at a time in a random order on the basis of how important each was in determining whether a person should vote. A paired sample t test confirmed that participants rated the three strong reasons we used in three reasons condition to be more important ($M_{\text{Strong\_Reasons}}$=5.43, SD=1.91) than the seven reasons we had deemed to be less strong ($M_{\text{Weak\_Reasons}}$=3.20, SD=.98), t (17)=11.18, $p<.001$.

effect more than participants who are lower in need for cognition, whose judgments may reflect heuristics (e.g., *length is strength*). We tested this prediction using a "Top 10 Reasons to Exercise" campaign from the *Medical News Today* website (Medical News Today 2013). *Medical News Today* is one of the most influential websites for medical news, offering hourly news updates on 128 different medical areas from the effects of diet on obesity to the consequences of texting while driving. It has a monthly readership of 3–4 million unique visitors and targets both physicians and the general public.

7.1 Participants and procedure

Sixty-one students completed a survey after being randomly e-mailed from the directory of a large public university (response rate of ~5 %, factoring in bounce backs). After seeing either the original "Top 10 Reasons to Exercise" PSA that contained a combination of very strong and mildly strong arguments (e.g., very strong: *Exercise helps keep your arteries flexible and malleable, which prevents heart disease and heart attacks*; mildly strong: *Participating in team sports like flag football, softball, basketball or sand volleyball enhances hand-eye coordination and improves your reflexes*) or our modified "Top Three Reasons to Exercise" campaign containing the three strongest reasons only, they reported their exercise intentions (1=not at all likely, 7=very likely), completed an 18-item NFC scale (Cacioppo et al. 1984), indicated whether being fit was a current goal, and recorded how much they exercised per week. Our focal sample consisted of 54 participants who reported the goal of being fit[3].

7.2 Results and discussion

As predicted, there was an interaction between participants' dispositional level of need for cognition and whether they saw our three reasons or the original 10 reasons campaign on their reported likelihood of exercising, β=−2.01, p=.05. A spotlight analysis showed that high NFC participants (mean+1 SD) expressed stronger intentions to exercise after seeing our three reasons (M=4.99) versus the original 10 reasons PSA (M=3.66), t=−2.23, p<.05, controlling for minutes exercised per week. Low NFC participants (mean–1 SD) showed a nonsignificant tendency in the opposite direction ($M_{3\_Reasons}$=4.21, $M_{10\_Reasons}$=4.62), t<1, p>.10.

8 Study 4: top 10 reasons to attend a university

While studies 1–3 demonstrate the proposed effect, study 4 examines it further by capturing not only the evaluator's perspective but also including the presenter's perspective. Study 4 also seeks to instantiate the effect in a different domain, further generalizing it to different issues. One common persuasive technique is to present the

[3] An outside group of observers was presented with the 10 reasons from the original top 10 reasons campaign one at a time in a random order and indicated the importance of each reason in determining whether a person should exercise (1=not at all important, 7=very important). Results from a paired sample t test again confirmed that the arguments from our three reasons condition were judged to be more important ($M_{Strong\_Reasons}$=6.15, SD=0.96) than the arguments that we had categorized to be weaker ($M_{Weak\_Reasons}$= 5.70, SD=0.82), t (19)=2.47, p<.03.

top 10 reasons to do something such as visit a specific tourist destination or even attend a given university. For example, the website College Confidential, the largest online forum on college issues, had a recent online discussion where forum participants gave reasons to attend the University of Michigan. In study 4, we used some of the reasons generated in that forum to attempt to convince people that they should consider applying to the University of Michigan. We also sought to demonstrate that presenting only the top one reason could be more convincing than presenting the top 10 reasons.

8.1 Participants and procedure

A total of 274 participants completed a between-subject study. For the *presenter's condition*, we asked the University of Michigan students: "Imagine that you are trying to convince people why one should attend the University of Michigan–Ann Arbor. Here is a list of the Top 10 Reasons:" At this point, participants saw a list of top 10 reasons that were actually taken from a real list of reasons on the website "College Confidential" (collegeconfidential.com). The reasons we used in our study ranged from the no. 1 reason on the list (e.g., *No academic weakness. Top 15 departments in every major field of study*) to the no. 10 reason (e.g., *You will never run out of coffee houses*). Participants were then asked, "If you were designing a one-page advertisement about the University of Michigan, would you list the Top 10 reasons or only The Top 1 reason to attend the University of Michigan?" The two options were counterbalanced such that half the time, the top 10 reasons appeared as the first option, and half the time, the top 1 reason appeared first.

Participants in the *evaluator's condition* were recruited from Amazon Mturk and read: "Imagine that you saw the following one-page advertisement on why one should attend the University of Michigan–Ann Arbor:" At this point, half the participants saw only the top 1 reason and half saw the full list of top 10 reasons. The dependent variable was "To what extent are you convinced by this advertisement that people should consider attending the University of Michigan?" (1=not at all, 7=very much)[4].

8.2 Results and discussion

As predicted, 83.4 % of the University of Michigan students in the presenter's condition recommended listing all top 10 reasons to attend the University of Michigan instead of only the top 1 reason (χ^2=24.02, N=51, p<.001). In contrast, from the evaluators' perspective, participants in the top 1 reason condition were more convinced that one should consider applying to the University of Michigan (M=4.48, SD=1.64) than were participants in the top 10 reasons condition (M=4.01, SD=1.61, F(1, 221)=4.72, p<.05). The direction and significance of this pattern in the evaluators' condition were identical regardless of whether the participants were college aged (25 and under, n=90; M_{1_Reason}=4.49; SD=1.69; $M_{10\_Reasons}$=3.89; SD=1.70) or not (26 and older, n=133; M_{1_Reason}=4.48; SD=1.62; $M_{10\_Reasons}$=4.09; SD=1.56), F<1 for the

[4] An outside group of observers was presented with the 10 reasons one at a time in a random order and indicated the importance of each reason in determining whether a person should attend the University of Michigan (1=not at all important, 7=very important). Results from a repeated measures ANOVA confirmed that the argument from our top 1 reason condition was judged to be more important ($M_{Strong\_Reasons}$=5.94, SD=1.26) than the arguments that we had categorized to be weaker ($M_{Weak\_Reasons}$=3.65, SD=1.21), F (1, 30)=57.14, p<.001.

interaction between age and 10 reasons versus one reason. Thus, we observe the predicted effects across both the presenter's and evaluator's conditions. We also demonstrate this effect comparing only the top 1 reason to the top 10 reasons. That said, we also note that the effect size in the evaluator condition between the top 1 reason and top 10 reasons is not particularly large. In part, that may be a function of how the top 1 reason was worded. Had we generated the reasons ourselves, we could have made the top 1 reason sound even more impressive (e.g., the UM website currently showcases promotional material stating that 99 of the graduate programs at UM are ranked in the top 10), potentially increasing the effect size between the top 1 reason and the top 10 reasons.

9 General discussion

Across four studies, the current results indicate that while marketing communicators believed that including mildly strong arguments in addition to highly strong ones would increase the persuasiveness of a marketing communication, their target audiences were actually less likely to express an interest in quitting smoking (study 1), voting (study 2), and engaging in fitness (study 3) after viewing a persuasive communication that contained a combination of highly and mildly strong arguments than after reading the same highly strong arguments by themselves. Study 4 complements these findings in a full design that includes both the presenter's and evaluator's conditions. In demonstrating this effect, the current results make two theoretical contributions to the literature. First, they suggest that the well-known averaging effect in impression formation (e.g., Anderson 1965) extends beyond targets that people typically conceptualize as unified entities, like consumer products and other people, to the context of persuasion, a domain where the individual arguments that comprise a message would actually seem to be independent of each other. That is, while the features of a product may naturally appear to interact with each other, for instance, while a hotel restaurant that is merely mediocre may affect consumers' expectations for the quality of the facilities at its spa, past work has left it less clear whether similar averaging-like processes would occur in the context of persuasive arguments since those arguments are in some real sense independent of each other. That is, the fact that exercise improves eye-hand coordination would not seem to bear on our judgments about whether it also reduces the chances of heart attacks in the same way. These results suggest that the tendency to impose gestalt unity on an object may occur regardless of whether that object would seem to have a natural coherence to it or not. By showing that this more-is-better strategy backfires not only in the context of product bundles but also occurs in the context of persuasion with arguments, the current paper brings to light a generalization that has wide ramifications and has not been previously articulated in the literature.

The current studies also contribute theoretically to the consumer behavior literature by showing that rather than being constrained to laboratory settings, policymakers in natural settings also exhibit the *Presenter's Paradox* (Weaver et al. 2012). That is, the materials for three of the current studies were taken from real-world persuasive communications designed by actual policymakers who were attempting to effect change in naturalistic contexts rather than by participants in a research study with less investment in the outcome of their choices.

The current research also contributes to work on advertising that has focused on examining the relationship between the perceived effectiveness and the actual effectiveness of ads (e.g., Dillard et al. 2007; Thornton et al. 1991) by bringing to light an important contextual variable that appears to systematically moderate the perceived/actual effectiveness relationship—namely whether the judgment is being made from the perspective of a person presenting information or that of a person evaluating information. The observed difference between presenters and evaluators in real-world persuasive advertising contexts strongly suggests that policymakers would be well-advised to experimentally evaluate their persuasive campaigns before implementing them on a large scale with the general public (for a similar call, see Fishbein et al. 2002).

Relation to other literatures. While conceptually related in some ways, the current effect is fundamentally different in several ways from the commonly known "dilution effect" (Nisbett et al. 1981). While studies on the dilution effect explicitly examine how information that is specifically chosen to be irrelevant and nondiagnostic to the judgment at hand affects evaluations (e.g., Nisbett et al. 1981; Meyvis and Janiszewski 2002; Tetlock et al. 1996)—for instance does learning about a student's favorite color, information that is irrelevant and extraneous to predictions about academic performance, lower an evaluator's academic expectations for a student who is said to study 30 h a week—the current studies focus on how mildly versus strongly favorable information—information that is always relevant to evaluators' judgments and presenters' presentation decisions—affects judgments. For instance, the fact that quitting smoking does actually improve the smell of one's car in study 1 in the current paper is in fact a benefit of quitting. So, while presenters in the current studies and in the past work on the Presenter's Paradox chose to include mildly favorable product features in their advertisements because they thought it would improve their case, we think it is unlikely that presenters would actually include "information that was selected for its manifest irrelevance to the behaviors to be predicted" (Nisbett et al. 1981, p. 252) in a real PSA that is intended to promote societal well-being.

Future research should investigate factors that may moderate the effect of averaging in persuasion contexts. One possibility is that the simple process of presenting a group of persuasive arguments in one list, as is generally done in "Top 10 Reasons" communications, may produce a greater tendency for perceivers to attempt to impose gestalt unity on the reasons as a whole and thus exhibit averaging-like effects. This would suggest that if something breaks that continuity, such as presenting the individual arguments on different pages rather than as one list, or perhaps even presenting each argument with a temporal delay in between, it may be possible to produce an adding process rather than an averaging one. Another interesting topic for future work is to assess how culture would affect perceivers' tendency to add versus average in impression formation contexts. If averaging is driven by holistic processing, then consumers from collectivistic cultures may be more likely to exhibit averaging processes in their judgments than those from individualistic ones.

From a practical standpoint, our results show that top 10 lists can reduce rather than enhance people's likelihood to adopt healthy lifestyles or make desired social decisions

relative to cases where only the strongest arguments are presented alone. For instance, each year, the National Health, Lung, and Blood Institute (NHLBI, part of NIH) receives over $3 billion in tax money from the Federal Government in order to, among other, advance understanding of the development and progression of disease, diagnosis of disease, and disease prevention (NHLBI 2013b). While the designers of their "Top 10 Reasons to Quit Smoking" PSA chose to include the less strong but still relevant reasons, they inadvertently *weakened* the message in their effort to *strengthen* it. Marketers and public policymakers should be very careful when designing such top 10 lists because mildly favorable reasons can detract from very favorable ones.

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