

האוניברסיטה העברית בירושלים
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**REPLY TO RODWAY,
SCHEPMAN & THOMA (2016)**

By

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מרכז פדרמן לחקר הרציונליות

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Reply to Rodway, Schepman & Thoma (2016)

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The new e-journal *i-Perception* recently published a critique by Rodway, Schepman and Thoma (2016) titled: *Reachability does not explain the middle preference: A comment on Bar-Hillel (2015)*. Their comment (hitherto called RST) ends thus: "Bar-Hillel's explanation of the middle preference ... is not supported by the evidence. An explanation in terms of the "middle-is-best" heuristic is still persuasive and is better ..." (RST, p. 4). Let me explain these two principles and their supposed confrontation as set up by RST.

My 2015 article (hitherto called MBH), in the words of its title, is about "Position effects in choice from simultaneous displays" (and explicitly *not*, as RST erroneously state, also about "serial choice tasks (where all options are presented one after the other)" (RST, p. 2). The reachability principle (Bar-Hillel, Peer & Acquisti, 2014) states that "when other things are equal – as when choosing from evidently identical objects [such as Coke bottles on a supermarket shelf] – the object located where it is easiest to reach or to reach for will be favored" (MBH, p. 423).

The " 'middle-is-best' heuristic", declared by RST as superior to reachability, is RST's renaming of the more commonly called "center-stage effect" – consumers' belief concerning product presentations in stores and markets that "options placed in the center of a simultaneously presented array are the most popular" (Valenzuela & Raghurir, 2009, p. 185). This belief about deliberately designed displays is an extension of a more basic belief about deliberate seating and standing arrangements for people, according to which "important people sit in the middle" (Raghurir & Valenzuela, 2006, p. 66).

RST correctly say that "Bar-Hillel states that she takes no issue with this [the center-stage] account" (RST, p. 3), but then proceed to pit the two accounts against each other nonetheless. For example, they charge that reachability "does not appear to have played any role ... [in explaining] the preference for the person in the middle of a photograph of job candidates" (RST, p. 2). Quite true – but neither did reachability ever purport otherwise. On the other hand, RST neglect to point out that the center-stage effect can play no role in explaining studies, addressed at length in MBH, where it is an edge that is preferred, rather than the middle. For one example (there are more in MBH), Rozin et al. (2011) found that moving a salad-bar item from the edge to the middle of the display of trays diminishes, rather than enhances, its popularity.

Two implications of RST's title are misleading. First, reachability is not meant to explain preference (a state of mind), but rather choice (an action). Second, it never pretended to explain *all* cases of middle advantage, but rather only those where the competing items are evidently identical. Preference and choice are of course intimately connected – but they are not the same. The distinction is especially important exactly where reachability is most apt, and the "middle-is-best" belief is least apt, namely the case of motor choice (rather than mere evaluation) from evidently identical items. It is unlikely that people facing a supermarket shelf stocked with Coke bottles have a "preference" for one over another, namely that they think there is a "best" bottle in the display, let alone that it is in its middle. But if they nonetheless must pick a single one of them, which one they

will reach for is likely determined by reachability. Similarly, people might well have some preference for one veggie over another in a salad bar (in the everyday sense of liking it better), and it is even possible that they think the best veggies are in the middle, yet will end up taking a less preferred one if their favorite, tucked away under the sneeze guard, is hard to reach (see Rozin et al., 2011).

RST's comment gives several examples of results where "the reachability explanation does not appear to be compatible with the data" (RST, p. 2). Since MBH never intended to explain those particular results by reachability in the first place, this critique is moot. MBH explicitly required several distinct psychological principles to account for the variety of position effects of which I was then aware. MBH discussed the center-stage effect, but did not include it in her parsimonious framework. The same holds for other ad hoc effects and other scholars' interpretation of their own results – MBH did not reject them, but her framework simply did not require them.

RST included but one example of a choice implemented by physical reaching, which they explain differently than MBH. "A 6"-wide plastic case with three identical highlighters was taped to the wall at eye level directly in front of the participants. The highlighters were spaced equidistantly so that they clearly occupied left, middle, and right positions within the case." (Shaw et al., 2000, p. 159). Most participants (76%) chose the middle one. "Contrary to Bar-Hillel's assertion [that middle items are more reachable, because reaching for them is more forgiving of inaccuracies in the reach], it is possible that it is more difficult, physically, to take the middle pen due to the proximity of the two surrounding pens" (RST, p. 2). The readers may judge for themselves which interpretation of reachability they find more compelling (Shaw et al. do not give the distance of the highlighters from the sides of the plastic case), and can even "test" themselves by imagining themselves making such a choice. The irony of this example is that, in order to explain it by the "middle-is-best" effect, one would have to impute to participants the belief that the middle item is better than the other two. In other words, this is clearly not an example of the superiority of the center-stage effect.

Raghubir and Valnezuela and myself are aware of each other's work, and do not view ourselves in competition, let alone in confrontation. Neither reachability nor the center-stage effect are imperialistic principles aspiring to account for all middle biases -- yet only reachability can hope to account for cases where edges have an advantage over the middle in physical choice (e.g., Christenfeld's route-choice results).

Rodway and his colleagues could have and should have criticized reachability without pitting it against the center-stage effect. But even just their critique of reachability is misguided and faulty.

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