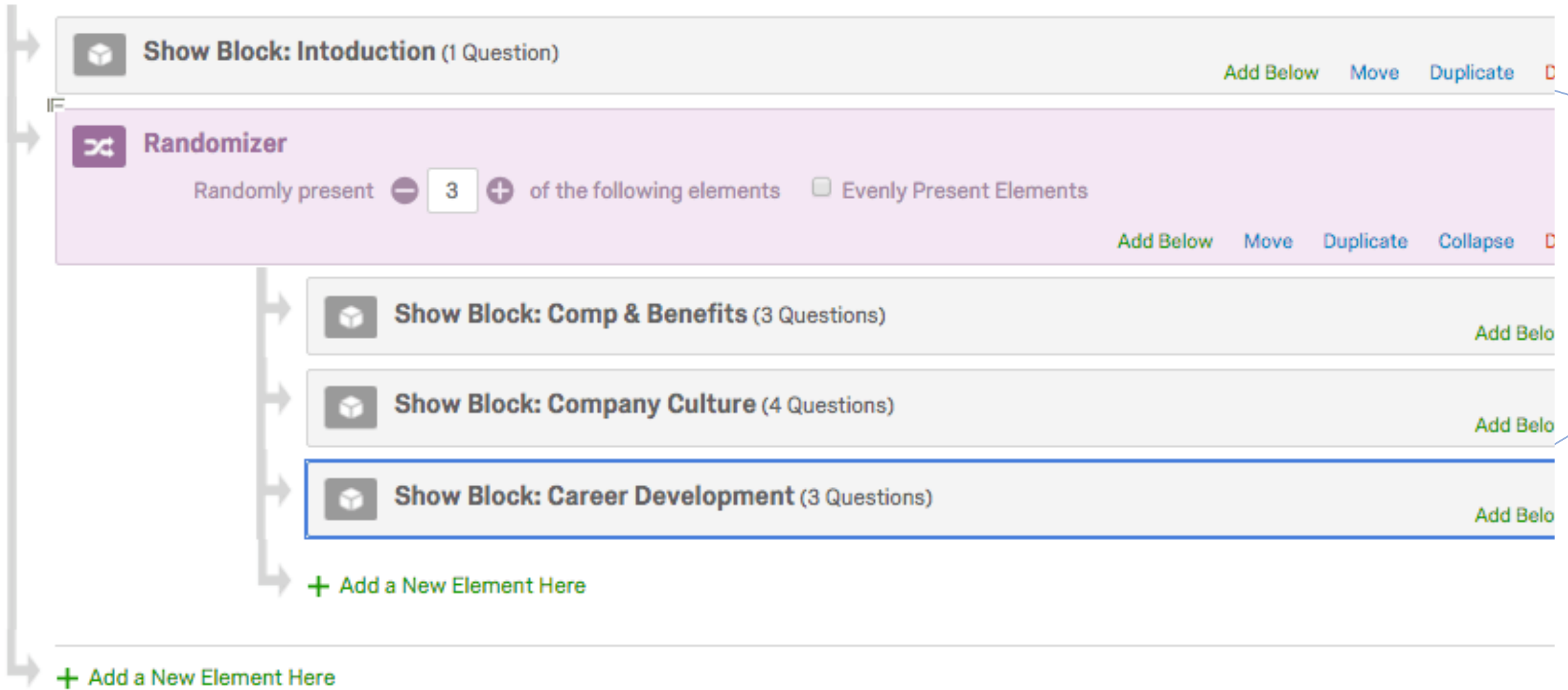




YIBING SUN

*QUALTRICS
RANDOMIZATION
FOR EXPERIMENTS*

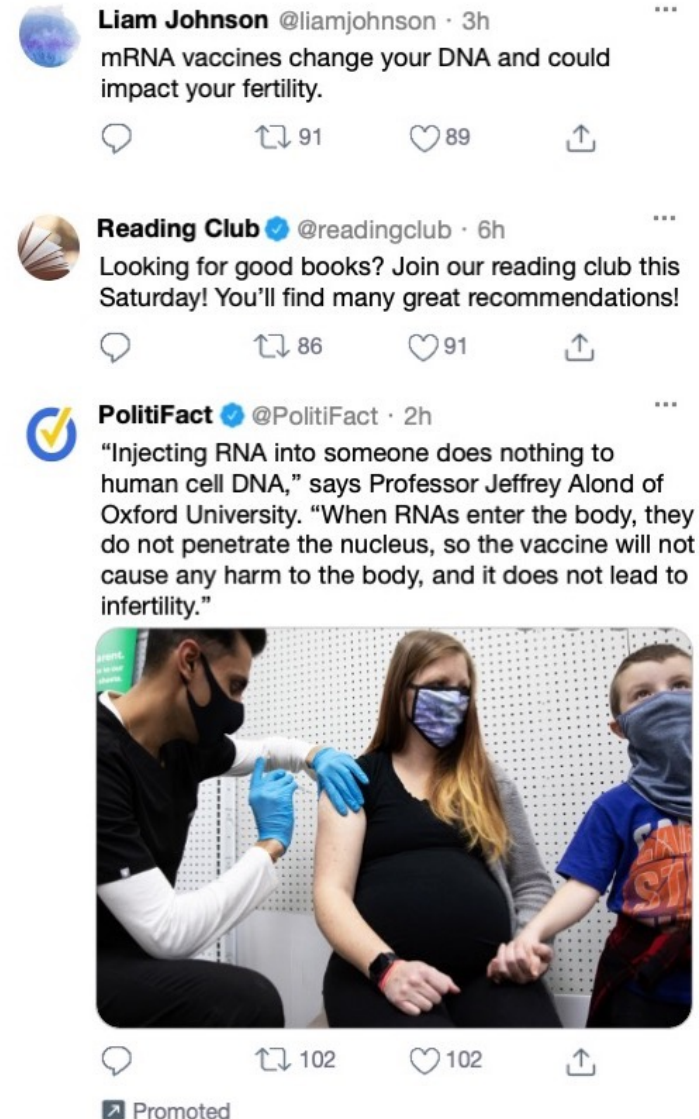
Survey Flow Employee Feedback



EXPERIMENT STIMULI RANDOMIZATION

Task:

- Imagine you have a factorial design:
delivery cues (ad-promotion, bot-retweet, direct-post, peer-retweet) x **image** (control, testimonial) + misinfo-only + mundane-post
- Format: 3 posts in total.
Misinformation is always before the correction message. Irrelevant posts randomly inserted in between.



POOL OF STIMULI

- The unreplicated categorical comparison encounters two threats to validity: **the case-category confounding** and **the concealed insufficiency of data**.

Task:

- Misinformation pool: 5; Correction: 5
- Image side: testimonial 5; control 5
- Mundane post: 5

SUMMARIZATION OF THE TASK





PolitiFact @PolitiFact · 2h

“Injecting RNA into someone does nothing to human cell DNA,” says Professor Jeffrey Alond of Oxford University. “When RNAs enter the body, they do not penetrate the nucleus, so the vaccine will not cause any harm to the body, and it does not lead to infertility.”



	cor_dna_testimonial_bot.jpg	4/15/22, 4:09 AM	87 KB	JPEG image
	cor_dna_testimonial_peer.jpg	4/15/22, 4:13 AM	89 KB	JPEG image
	cor_dna_testimonial_self.jpg	4/15/22, 4:22 AM	87 KB	JPEG image
	cor_ovary_control_ad.jpg	4/15/22, 3:38 AM	93 KB	JPEG image
	cor_ovary_control_bot.jpg	4/15/22, 4:08 AM	94 KB	JPEG image
	cor_ovary_control_peer.jpg	4/15/22, 4:12 AM	94 KB	JPEG image
	cor_ovary_control_self.jpg	4/15/22, 4:21 AM	92 KB	JPEG image
	cor_ovary_testimonial_ad.jpg	4/15/22, 3:49 AM	73 KB	JPEG image
	cor_ovary_testimonial_bot.jpg	4/15/22, 4:10 AM	71 KB	JPEG image
	cor_ovary_testimonial_peer.jpg	4/15/22, 4:14 AM	72 KB	JPEG image
	cor_ovary_testimonial_self.jpg	4/15/22, 4:22 AM	69 KB	JPEG image
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	cor_period_control_bot.jpg	4/15/22, 4:08 AM	99 KB	JPEG image
	cor_period_control_peer.jpg	4/15/22, 4:12 AM	100 KB	JPEG image
	cor_period_control_self.jpg	4/15/22, 4:21 AM	97 KB	JPEG image
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	cor_period_testimonial_self.jpg	4/15/22, 4:23 AM	84 KB	JPEG image
	cor_protein_control_ad.jpg	4/15/22, 3:37 AM	69 KB	JPEG image
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	cor_protein_testimonial_peer.jpg	4/15/22, 4:13 AM	81 KB	JPEG image
	cor_protein_testimonial_self.jpg	4/15/22, 4:21 AM	79 KB	JPEG image
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	cor_syncytin_control_bot.jpg	4/15/22, 4:08 AM	77 KB	JPEG image
	cor_syncytin_control_peer.jpg	4/15/22, 4:12 AM	78 KB	JPEG image
	cor_syncytin_control_self.jpg	4/15/22, 4:20 AM	74 KB	JPEG image

STIMULI PREPARATION

TO AVOID TOO MUCH COMPLEXITY IN THE JAVASCRIPT, WE PREPARED IN TOTAL 50 MOCK TWEETS.



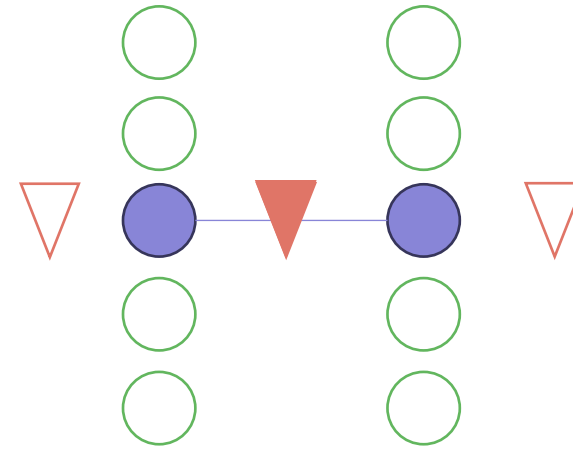
@Yibing_Sun

TASK

```
if condition = mundane-post:  
    3 posts from pool of mundane post  
else:  
    if condition = mis_only:  
    if condition = control_ad:  
        ...  
    if condition = control_bot:  
    if condition = control_peer:  
    if condition = control_self:  
        ... (in total 9)
```



} similar



if condition = control_ad:
 choose misinfo first,
 attach relevant correction,
 insert mundane post in between

CODE – DEFINE FUNCTION

```
function getRandom(arr, n) {  
  var result = new Array(n),  
      len = arr.length,  
      taken = new Array(len);  
  if (n > len)  
    throw new RangeError('getRandom: more elements taken than available');  
  while (n-->0) {  
    var x = Math.floor(Math.random() * len);  
    result[n] = arr[x in taken ? taken[x] : x];  
    taken[x] = --len in taken ? taken[len] : len;  
  }  
  return result;  
}
```

Function: randomly draw an element in a list
arr: list in R or Python;
n: number

CODE

```
var mis_posts = ['mis_protein', 'mis_dna', 'mis_syncytin', 'mis_ovary', 'mis_period'];
var neu_posts = ['neutral1', 'neutral2', 'neutral3', 'neutral4', 'neutral5'];
//condition2 = control_ad
var pool = [['mis_protein', 'cor_protein_control_ad'], ['mis_dna', 'cor_dna_control_ad'],
            ['mis_syncytin', 'cor_syncytin_control_ad'], ['mis_ovary', 'cor_ovary_control_ad'],
            ['mis_period', 'cor_period_control_ad']];
var my_posts_selected = getRandom(pool, 1);
var my_post_selected = my_posts_selected.flat(); // flat the array to ensure neutral could be inserted
//randomly
var neu_post_selected = getRandom(neu_posts, 1);
var x = Math.floor(Math.random() * 3); // index of the position
my_post_selected.splice(x, 0, neu_post_selected); //insert the neutr
var output = my_post_selected.flat(); //flat the array
console.log("control_ad:", output);
```

list of lists: controls the sequence

how many elements you want to remove from the array starting from index x. In this case, 0 means you're not removing any elements.