Incentive Research Foundation

Reward Presentation and Attraction: A Biometric Experiment

Introduction

In Fall 2016, the Incentive Research Foundation commissioned Flying Horse Communications and its Chief Scientist, neuroscience expert Dr. Steven Genco, to conduct a first-of-a-kind experiment in the field of rewards and recognition. The experiment used biometric techniques borrowed from the science of neuromarketing. It was designed to gain additional insight into reward-earners' preference in receiving rewards and to test two hypotheses about rewards themselves:

> ***H1:*** Participants will exhibit a stronger response (attraction) to highly salient non-cash rewards than to cash *at the unconscious level*.
>
> ***H2:*** After participants are given time to examine and consider their non-cash and cash reward options, most will choose a non-cash, hedonic reward over the equivalent cash.

The first paper in this series, *Conscious and Unconscious Reward Preference & Choice: A Biometric Experiment*, addressed the hypotheses. In this paper, we explore the question of reward-earner preference – at both the conscious and unconscious levels – in the presentation of rewards and recognition.

Background

A search for published academic research on the topic of how people prefer to receive recognition and rewards yields few results. However, Gallup and others have conducted numerous surveys over the past decade that demonstrate people are as unique in how they prefer to be recognized as they are in the types of rewards they prefer (Rath, 2004).

Classic philosophers and social psychologists from William James[1] to Abraham Maslow[2] as well as modern psychologists and behavioral economists from Edward Deci & Richard Ryan[3] to Paul Lawrence and Nitin Nohria,[4] acknowledge the deep human *need* for appreciation and recognition. Virtually everyone responds positively to recognition. Organizations proficient in recognizing their employees, customers and other key stakeholders enjoy significant productivity gains and greater commitment and engagement (Van Dyke & Mihal, 2011; Bartlomiejczuk, 2015)

Clearly, recognition matters a great deal, but its impact can vary widely depending on how it is delivered (Jeffrey, 2009; Shaffer, 2009; Dzuranin, Randolph, & Stuart, 2013; Bartlomiejczuk, 2015; Kagel & Roth, 2016). In the first paper in this series, we explored reward type (cash vs. non-cash) to gain insight into unconscious preference and explicit choice. Our findings suggest both an unconscious and conscious preference for non-cash rewards, which supports a growing body of research that suggests non-cash rewards are more effective in driving performance gains, retention and engagement (Schweyer, 2017).

Our findings in this study (as reported in the first paper) confirm the importance of reward choice and individualization. It offers yet another warning against taking a one-size-fits-all approach to rewards and recognition. The experiments specific to this second paper in the series demonstrate that the same lesson applies to how rewards are presented. As other studies and surveys have found, some people prefer a great deal of pomp and ceremony when they are recognized, while others dislike the stage and would prefer a reserved and intimate presentation in front of their

1 See http://www.returnonhappiness.com/can-you-create-a-culture-of-appreciation/love-2012006_960_720/
2 See: https://www.simplypsychology.org/maslow.html
3 See: http://selfdeterminationtheory.org
4 See: Driven: How Human Nature Shapes our Choices (Jossey-Bass, 2002) by Paul Lawrence and Nitin Nohria

closest colleagues. Still, others prefer no show at all, just a verbal or written note of appreciation along with whatever cash or tangible non-cash reward that accompanies it.

The Experiment

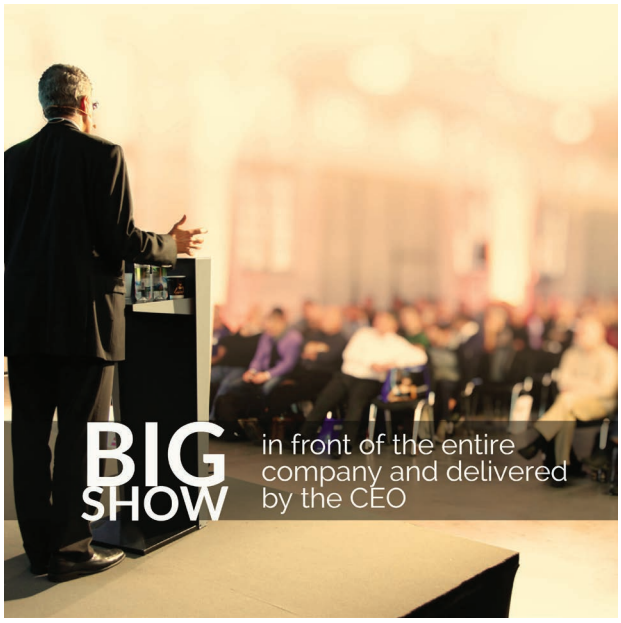
For the experiment, 42 participants of varying age, gender and profession were recruited. In the reward presentation component of the experiment, each participant wore a headset and listened to a series of four realistic audio scenarios in which they received a reward during four different types of presentation:

A "Big Show," in front of the entire company and delivered by the CEO

A "Little Show," involving their work group and presented by the immediate manager

"Peer-to-Peer," in which immediate co-workers presented the reward with only the work group in attendance

"Private," in which a private, personal note was sent by the CEO accompanying the reward



While subjects listened to the presentation scenarios, they were biometrically assessed using two biometric techniques.

Pupil dilation: In brief, pupillometry measures arousal and interest based on involuntary expansion or contraction of the eyes' pupils. Pupil dilation is described more completely in the first paper.

BIS/BAS refers to two measures: Behavioral Approach System (BAS), which measures "appetitive motives," and the propensity for a subject to "move toward something desired." The Behavioral Inhibition System (BIS) measures avoidance and the propensity for a subject to "move away from something unpleasant." (University of Miami, n.d.) In more general terms, BIS/BAS measures a person's underlying (i.e. unconscious) preference for different kinds of experiences, (Demaree, Robinson, & Everhart, 2005) including, in the case of this experiment, how people like to be recognized.

Our results are captured in Table One below.

Table One: Audio Presentation Summary

Groups	Big Show	Little Show	Peer-to-Peer	Keep it Private	Notes
Overall	Ranked #3 (77%)	Ranked #1 (86%)	Ranked #2 (79%)	Ranked #4 (70%)	All ratings were relatively high
Age Groups	#1 (tie) for GenX Most disliked by Millennials (30%)	#1 (tie) for GenX	#1 for Millennials	#4 for both Millennials and GenX	Millennials prefer smaller circle scenarios
Sales/NonSales	#3 (tie) for Sales #2 (tie) for NonSales	#1 for both NonSales and Sales		#4 for NonSales #3 (tie) for Sales	Survey preferences very similar
Gender	#1 (tie) for Men #3 for Women	#1 (tie) for Men #2 for Women	#1 (tie) for Men #1 for Women	#4 for Women #3 for Men	Women rated Big Show lower (37% neutral or less, vs. 9% for Men)
BIS/BAS	Higher BIS > higher ratings Higher BAS, Drive > lower ratings	No sig. differences	Higher BIS > lower ratings	No sig. differences	BIS/BAS>Big Show associations are unexpected
Pupil dilation (arousal) overall	Sig. less dilation than for Little Show, about equal to Peer to Peer	Sig. more dilation than others	Sig. less dilation than for Little Show, about equal to Big Show	Sig. less dilation than others	**Little Show is the most arousing scenario**

Though each of the presentation scenarios rated relatively well, our subjects' unconscious reactions suggest a greater preference for a "Little Show" than for other forms of presentation. Importantly, when asked to rate the options (a conscious choice) "Little Show" is preferred by an even greater margin (86%).

The "Peer-to-Peer" and "Big Show" presentations also rated well and closely with respect to each other. The "Private" presentation rated consistently last in its ability to "arouse" the interests of our subjects as measured by pupil dilation, and in explicit ratings. This supports the large body of research that suggests at least some form of public recognition is important to all reward earners, and it adds new evidence that smaller (and perhaps more meaningful) presentations may be more effective than big, company-wide events for most people.

Our experiment was relatively small with only 42 participants. Findings by demographic group in this experiment should be considered with that in mind. Table one results above show that men were evenly split in their attraction to the "Big Show," "Little Show" and "Peer-to-Peer" presentation,

while women were clearly attracted more to "Peer-to-Peer" both in their explicit ratings and as assessed by pupil dilation. More interesting perhaps, sales people were less attracted to the "Big Show" than non-sales people.

Table Two below summarizes our findings by age group, role and gender. By age group, Millennials appear significantly more drawn to "Peer-to-Peer" presentations than other options. This is an interesting and potentially encouraging finding when juxtaposed with a large body of thought and research that suggests Millennials need more frequent recognition than other cohorts (Hershatter & Epstein, 2010). Our results also suggest that women are significantly less drawn to "private" reward presentations than men at the unconscious level.

Table Two: Audio Presentation Summary by Demographic

Groups	Big Show	Little Show	Peer-to-Peer	Keep it Private	Notes
Age Groups		Sig. more arousing for GenX than Millennials	Sig. more arousing for Millennials than GenX		GenX pref. for Little Show supported by pupil dilation
Sales/NonSales	Sig. more arousing for NonSales than Sales	Sig. more arousing for NonSales than Sales	Sig. more arousing for Sales than NonSales		
Gender			Sig. more arousing for Women than Men	Sig. more rousing for Men than Women	

Conclusions

The audio presentation scenarios portion of our experiment revealed several unconscious and marked differences in preference for reward presentation scenarios using the biometrics techniques of BIS/BAS and pupil dilation. This is it important because we tend to use visible indicators such as age, gender and job type, to assume what people might want. Our results reveal new, invisible indicators that are strikingly important.

In addition to those noted above, the "Big Show" option was less appealing to salespeople and women than to non-salespeople and men. It was the most disliked option by Millennials, but tied for first among Gen X. It is intriguing too, that those with high BIS where drawn to the "Big Show" presentation. These clues into the psyches of broad groups will help form additional hypotheses that can be tested in future research with larger numbers of participants.

Ultimately, our results, including those from the visual components of the study, demonstrate a highly-individualized range of preference. They suggest again, in keeping with much prior research, that rewards and reward presentation are more effective when individualized to each person's preferences. Thus, the most compelling indicator from these audio-based biometric experiments may be that reward presentation preferences can not be closely predicted on the basis of gender, role, age or even the combination of all three.

This conclusion should be further explored in future research with larger sample sizes. We expect future biometric-based experiments involving a larger number of subjects will bolster our findings with respect to wide variation in reward type and reward presentation preference.

To read the full report, please visit http://theirf.org/research/reward-presentation-and-attraction-a-biometric-experiment/2348/

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