

Name of concept

Barnum effect, also known as Forer effect

Description

The Barnum effect suggests that people are likely to believe statements about themselves (usually their personality) that are presented as if they are tailored to them, but that in fact cover generic statements that could apply to anyone. This was demonstrated by Forer, who gave people statements such as “You have a great deal of unused capacity, which you have not turned to your advantage.” and asked people to rate whether these statements applied to them. As people do not realise these statements are generic, instead of tailored to their specific personality, people view them as assessments of their personality and are likely to overestimate the accuracy of the personality test. The Barnum effect is therefore a complicating factor in the design of personality tests, as the question rises whether the personality test is indeed measuring personality, or merely giving statements that can apply to many people. Another area in which the Barnum effect can be observed is in horoscopes, where people who believe in them are likely to explain the generic statements in such a way that the horoscope was correct.

Application within the field of cybersecurity

The Barnum effect is widely used in scams and phishing emails. As people who send phishing emails often do so by sending a generic message to a large population of users, these cannot easily be tailored to individual situations. However, by using statements that incorporate the Barnum effect principle, they can make these messages seem to be more personally relevant than they actually are. This can include messaging regarding parcels that are to be delivered, especially in the weeks leading up to Christmas, but also more generic messages surrounding bank transactions. One real-life example where scammers use the Barnum effect is depicted below. In this email, people are led to believe that scammers have had access to their webcam while they were browsing porn websites. They then go on to suggest that the receiver of the email watched some embarrassing video (“You have a very interesting and special taste (you understand what I mean”). The receiver of the email is thereby encouraged to think about what the most embarrassing video was they had viewed recently, and the scammers use this Barnum effect to scare people into paying up to ensure their family and friends do not receive the video. In truth, there is no video and no hack, it is simply a scammer who used a data breach to find a list of email addresses and old passwords to make the email seem more genuine.

Real scam email with account info, password and payment link removed:

Hello!

I am a representative of the ChaosCC hacker group.
In the period from 23/06/2019 to 11/08/2019 we got access to your account
ACCOUNT INFO] by hacking one of the domain.com mail servers.

Your pass for above account on moment of hack was: [AN ACTUAL PASSWORD]

We are also aware of your intimate adventures on the Internet. We know that you
adore adult sites and we know about your sexual addictions. You have a very

interesting and special taste (you understand what I mean). While browsing these sites, your device's camera automatically turns on. Video-record you and what you watch is being save. After that, the video clip is automatically saved on our server.

At the moment, several analogy video records have been collected. From the moment you read this letter, after 60 hours, all your contacts on this email box and in your instant messengers will receive these clips and files with your correspondence. If you do not want this, transfer 550\$ to our Bitcoin cryptocurrency wallet: [LINK REMOVED]
Take care of yourself!

Annotated bibliography

Dove (2018). Dove investigated the Barnum effect in victims of fraud. She found that people who in the past had been victims of successful scams, were more likely to rate positive statements about themselves as true, in comparison to people who had not been victims of fraud. She suggests that victims might be more likely to be affected by flattery, and that scammers use these techniques and approaches in their scams to maximise their success.

Forer (1949). The original study that demonstrated the Barnum effect. In this study, participants were administered a personality test, and later received what they thought to be a personal personality sketch. The participants were then asked to rate the various statements in the sketch based on how much they believed these to apply to themselves, and Forer showed that participants estimated the accuracy of these 'personalised' statements to be high.

Teunisse et al. (2019). Teunisse and colleagues designed a gullibility scale, to better measure how gullible people are. They then test this scale across a set of studies to validate the scale. In one of these studies, they show that gullibility is related to whether participants reply to unsolicited emails. This suggests that part of the success of the Barnum effect in scams might be increased based on personal characteristics such as gullibility.

References

- Dove, M. (2018). *Predicting individual differences in vulnerability to fraud* (Doctoral dissertation, University of Portsmouth).
- Forer, B. R. (1949). The fallacy of personal validation: a classroom demonstration of gullibility. *The Journal of Abnormal and Social Psychology*, 44(1), 118.
- Teunisse, A. K., Case, T. I., Fitness, J., & Sweller, N. (2020). I should have known better: Development of a self-report measure of gullibility. *Personality and Social Psychology Bulletin*, 46(3), 408-423.