We believe we have a good perception of what's going on, but in reality, it stinks. Our senses easily play tricks on us.

It seems Scrooge was right about senses, Afterall, a little thing does affect them.

Apple pie tastes good, spinach pie, not so good, and it tastes even worse if we were expecting apple pie. This glass of wine looks good and will taste good until we find out it has turned into vinegar.

Perceptions are formed from electrical signals heading to our brain and creating all these neural network connections. The problem is by the time this electrical signal hits memory, it has already been mixed and encoded with bad data, and when it hits long-term memory, biased and encoding also gets stored.

You've heard the term garbage in – garbage out, well, with the human brain, that term has applied significance. Messages get encoded with garbage going in; then on the way out, the garbled messages are again filled, but this time with our perceptions at the current time.

Our mind fills in details with missing pieces of information that may or may not be there, it's called:

Context of Association

Our perceptions are based upon the context, and that context can be dependent on whether the object in question is in the foreground or background. This was a leading thought during the Gestalt movement; the whole is more than the sum of the parts.

We use these strategies to come up with the best guess, it feels like, it looks like, it probably is.

Security

How many times have you heard of a security breach, and realized this had happened already, ***Social engineering, Phishing, etc.,*** they happen repeatedly.

When dealing with cybersecurity solutions, we want to be aware that we may be using these laws, without understanding the significance.

Under Gestalt psychology, we use different strategies to help us understand the external stimuli as a whole is more than the sum of its parts. Sometimes these are referred to as Gestalt laws.

Therefore, as an example, was a cybersecurity policy implemented due to one of these strategies/laws?

1) Similarity

Policy for one federal agency should be developed the same as a policy for another federal agency. We group similar components of the policy (the sum) if they are perceived to belong to the whole, regardless of whether they hold or not.

2) Symmetry

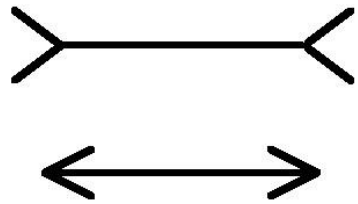
The amount of resources we use to develop the last cybersecurity solution should be the same as the level of resources needed to develop a new cyber security solution. It's the balance that is complete, which can be wrong.

We get the main image, but the rest of the details are filled in, encoded with meaningless data that:

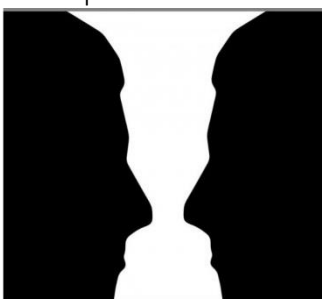
We believe we know its true.

Again -- it doesn't matter whether it's true or not, we believe it's true

These illusions should be familiar to us:
Which line is bigger



Is this picture a vase or a face?



The problem wasn't the persons face, or the length of the line; it was the relationship that existed. These contextual cues will help us to answer a question, then to eventually guide our behavior

We then seek help to fill in this missing data from what we know previously, to help us answer the question, which line is bigger, and we typically use five different strategies

1) Similarity
2) Symmetry
3) Proximity
4) Closure
5) Common Fate

3) Proximity

The closer the objects appear, the more they form their own unique group. The same physical proximity device key fob will be needed for all access points in a close area. Of course, when one is compromised, they all may be compromised

4) Closure

Even if something appears not to be closed, we will sense it as being closed. Our mind will fill in the missing details. Our minds prefer closed entities, and even if it is not closed, we will assume it is e.g., a finished risk management procedure.

5) Continuity

We see objects on a path, instead of discrete things. When applicable we see things as a means to an end. We see the finished security policy; we see the finished code. We see the finished disaster recovery plan. We see the pieces as on a smooth path to the finished product, but could we have missed some steps along the way?

There are more laws of Gestalt; these are more of the most common ones. We cannot assume a one size fits all, and we must understand that by using one of these strategies to help us look for an answer, can cause vulnerabilities in other areas – ever install a software patch, only to cause havoc.

These strategies can help us in our daily lives, but when it comes to security, *they can also hinder effective security protection measures.*

"Wertheimer, Max.". "Wertheimer, Max." International Encyclopedia of the Social Sciences, Encyclopedia.com, 2018, www.encyclopedia.com/people/medicine/psychology-and-psychiatry-biographies/max-wertheimer.
