

*Bottoms Up / Top Down for Cybersecurity in the life of a Goldfish*

<p><i>Bottoms Up (Processing or Design)</i></p>	<p><i>Top Down</i></p>
<p>Our direct senses, what we see, hear, feel, touch. Our reading, training, daily work all gets fed into our neural nets.</p>	<p>Flipping this on its heels, and like everything with cybersecurity, it's not that we don't have enough data; we have too much data and not enough information. We have too much of it to process, <i>so a lot of it goes by the wastebasket</i></p>
<p>We have to remember, even with all our security training, and experience, our senses are feeding into and creating associations in our brain's neural networks.</p>	<p>Our stored data, memories, habits, experiences, what we've been told, what we've been shown, what we've heard.</p>
<p>A major mistake is often confusing <b>Bottoms Up design with Bottoms Up processing</b>. Bottoms Up design is telling upper management what might be needed. Bottoms Up processing is our neural nets activating to solve some issue, usually a Tops-Down directive.</p>	<p>On top of that data, we have too much direction, e.g., Security Frameworks, Compliance, and Regulations, Management directives, etc.</p>
<p>These associations are critical to our learning, <b>the more we practice these associations, the stronger they become</b>. However, the same is true the less we practice. We might see a lot of vulnerabilities like viruses, phishing, social networks, but less on RootKits, and the less we work on Root Kits, <b>the weaker the association</b> will become.</p>	<p>As Cybersecurity professionals we may be asked to implement a policy we have never seen – <b>and we are asked to use our Bottoms Up encoded data</b> – what did we say about that encoded data?</p> <p><i>Garbage in / garbage out</i></p> <p>It's more like</p>
<p>All these things we experience get encoded into our memories, and like how we have discussed earlier:</p>	<p><i>Garbage (encoding) in / garbage (decoding) out</i></p>

Garbage in / garbage out.

The encoding data is usually a mess filled in with details that do not even exist in some cases.

It is not that we didn't pay attention, it is more likely that we didn't know what to pay attention to, and we have to fill in the missing details with our data that was encoded earlier.

We do this all the time.

*You know, I remember something like that, where was that now, where did I see that?*

Everything gets stored, our memories, past experiences, including faulty encoded data.

Think now of all the security knowledge we have obtained over the years - did we encode garbage in with the details?

We pay attention to only a little bit of the information, and assume the rest – our attention span is very limited –

Today, we have the attention span of a goldfish.

What would happen in your manager came in and said we now must start a process to implement the European's Union General Data Protection Regulation (GDPR) Regulation, and remembering we are coming in with just our previously stored encoded knowledge, what would be the result?

We are now using Bottoms Up processing to solve a Tops Down directive.

We have been now asked to decode data (but in our new experiences), and it is not difficult to change someone's current experiences (and changing someone's current experiences will lead to changes in their behavior), so

What will that changed behavior lead too?

Remember you are usually asked to implement a Tops Down directive, with Bottoms Up Processing, be aware of this happening.