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Decoding the Human Firewall: The Psychology Behind Social Engineering Attacks

Understanding and Mitigating Human Vulnerabilities in Cybersecurity

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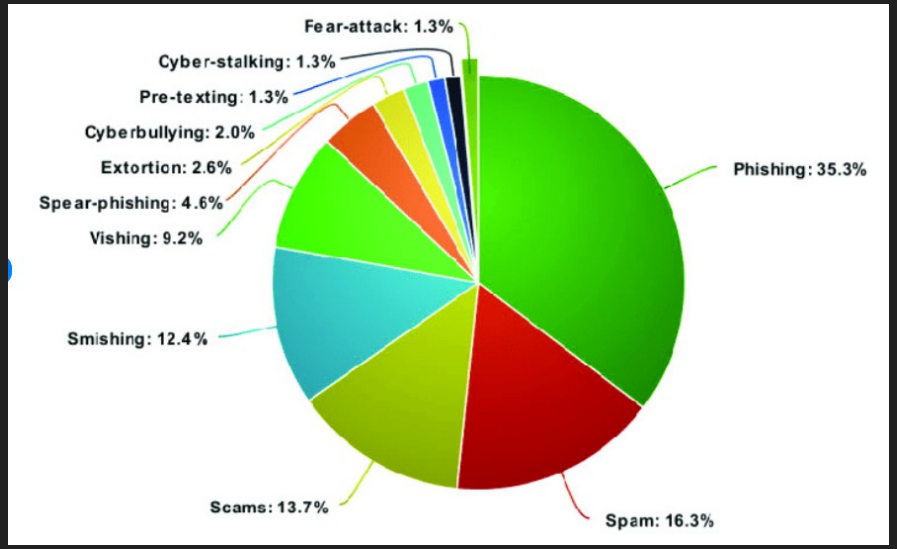
The Prevalence of Social Engineering

Up to 98% of cyber attacks involve some form of social engineering.



Source

What is Social Engineering?

Manipulation of individuals into divulging confidential information or performing actions beneficial to the attacker.

Common Forms:

- **Phishing -** deceptive messages (usually emails) designed to trick you into revealing sensitive information or clicking malicious links.
- **Pretexting -** an attacker invents a false identity or scenario to manipulate you into sharing information or access.
- **Baiting -** luring victims with something enticing — like a free USB drive — that actually contains malware.
- **Tailgating -** a physical breach where someone sneaks into a secure area by following an authorized person.

The Human Brain: A Double-Edged Sword

Our cognitive shortcuts (heuristics) and biases can be exploited.

Authority Bias

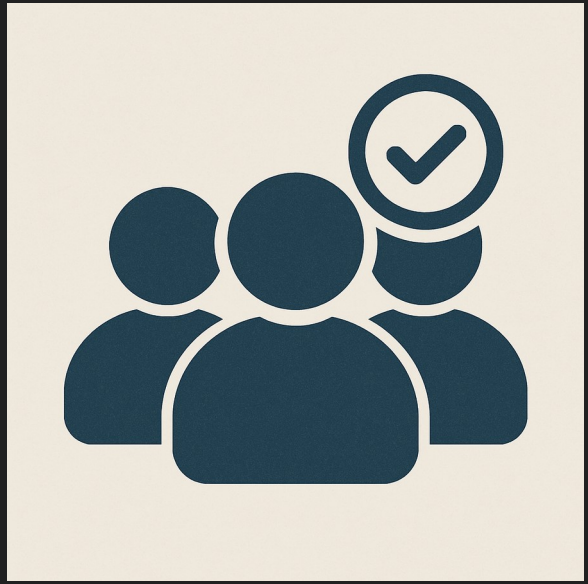
Tendency to comply with figures of authority.

Example: Employees might follow instructions from someone posing as a company executive without verification.

Social Proof Bias

Looking to others to determine correct behavior.

Example: Attackers use fake testimonials to legitimize scams.



Affect Heuristic

Making decisions based on emotions rather than logic.

Example: Clicking on a suspicious link due to excitement or fear.

Combating Psychological Manipulation

Strategies:

- Pause and Reflect: take a moment before responding to unexpected requests.
- Verify Sources: independently confirm the legitimacy of communications.
- Continuous Education: regular training on recognizing and resisting manipulation tactics.

Conclusion and Call to Action

Key Takeaway: Awareness of cognitive biases enhances our defense against social engineering.

Call to Action: Commit to questioning and verifying before acting on unsolicited requests.

The ABC of due diligence: assume nothing, believe nobody and check everything

By decoding our own minds, we fortify our defenses against manipulation.

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THANK YOU!

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