Persuasion and Phishing: Analysing the Interplay of Persuasion Tactics in Cyber Threats

Presenter: Kalam Khadka

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CISSE™

Introduction

Social Engineering

Phishing

Principles of Persuasion

Cialdini's six Principles of Persuasion

Gragg's Social Engineering Land Mines (SELM)

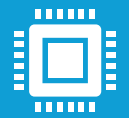
Stajano & Wilson's Seven Principles for Systems

Ferreira & Teles's five Principle of Persuasion in Social Engineering

Purpose and objectives

How are five Principles of Persuasion in Social Engineering (PPSE) used in the context of phishing emails?

How PPSE as compliance principles link with other entities of ontological model of social engineering?



What are the emerging patterns and trends in phishing email attacks?

How to prevent and protect from the diverse and complex social engineering attacks?

Identifying Principles Of Persuasion In Phishing Email Content and Subject

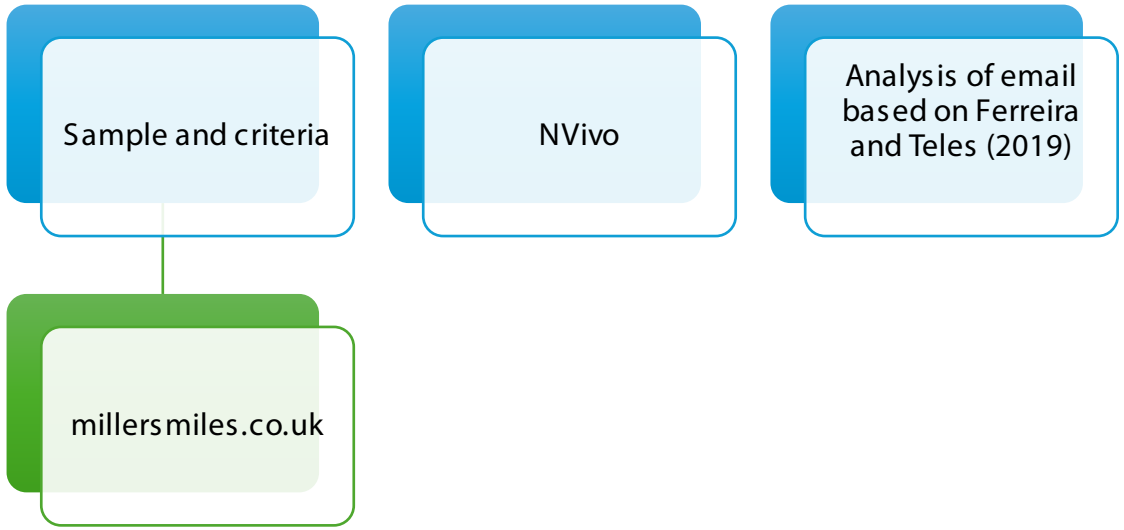
Authority: Emails from trusted institutions (e.g., PayPal, Apple).

Social Proof: Colleagues or others have already complied.

Deception: Pretending to be someone familiar.

Distraction: Creating urgency to bypass critical thinking (most common).

Integrity: Leveraging obligation to secure compliance.



Persuasion In Phishing Email Content

- Word Frequency for whole email

Fig. 1. Word Cloud

The Principles Of Persuasion In Phishing Email Content

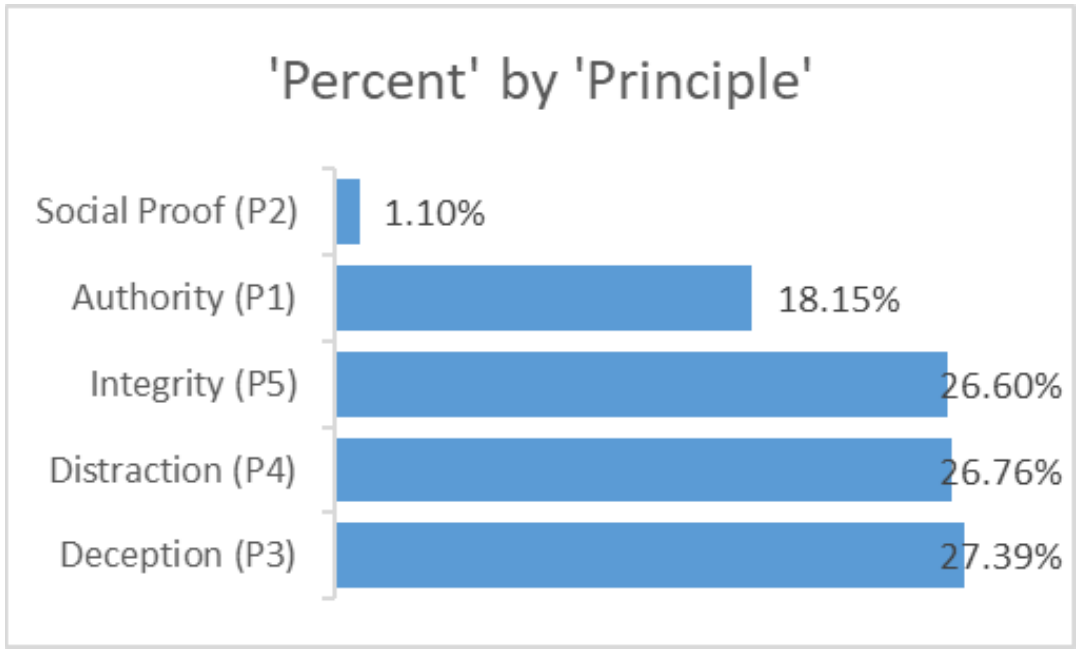


Fig 2. Percent by Principles

Main Principle	Sub-Principle	Files	References
Distraction (P4)		171	538
	Strong Affect (P4.3)	110	191
	Overloading (P4.2)	115	180
	Scarcity (P4.1)	68	103
	Need and Greed (P4.4)	41	63
Deception (P3)		175	530
	General Deception (P3.1)	115	228
	Liking and Similarity (P3.3)	98	171
	Deceptive Relationship (P3.2)	101	121
Integrity (P5)		170	508
	Reciprocation (P5.4)	129	211
	Integrity (P5.1)	74	106
	Consistency (P5.2)	67	102
	Commitment (P5.3)	68	88
Authority (P1)		116	196
Social Proof (P2)		7	16
	Herd (P2.1)	7	7
	Moral Duty (P2.3)	7	7
	Diffusion of Responsibility (P2.2)	1	1

Fig 3. Results table of coding

Ontological Model of Social Engineering

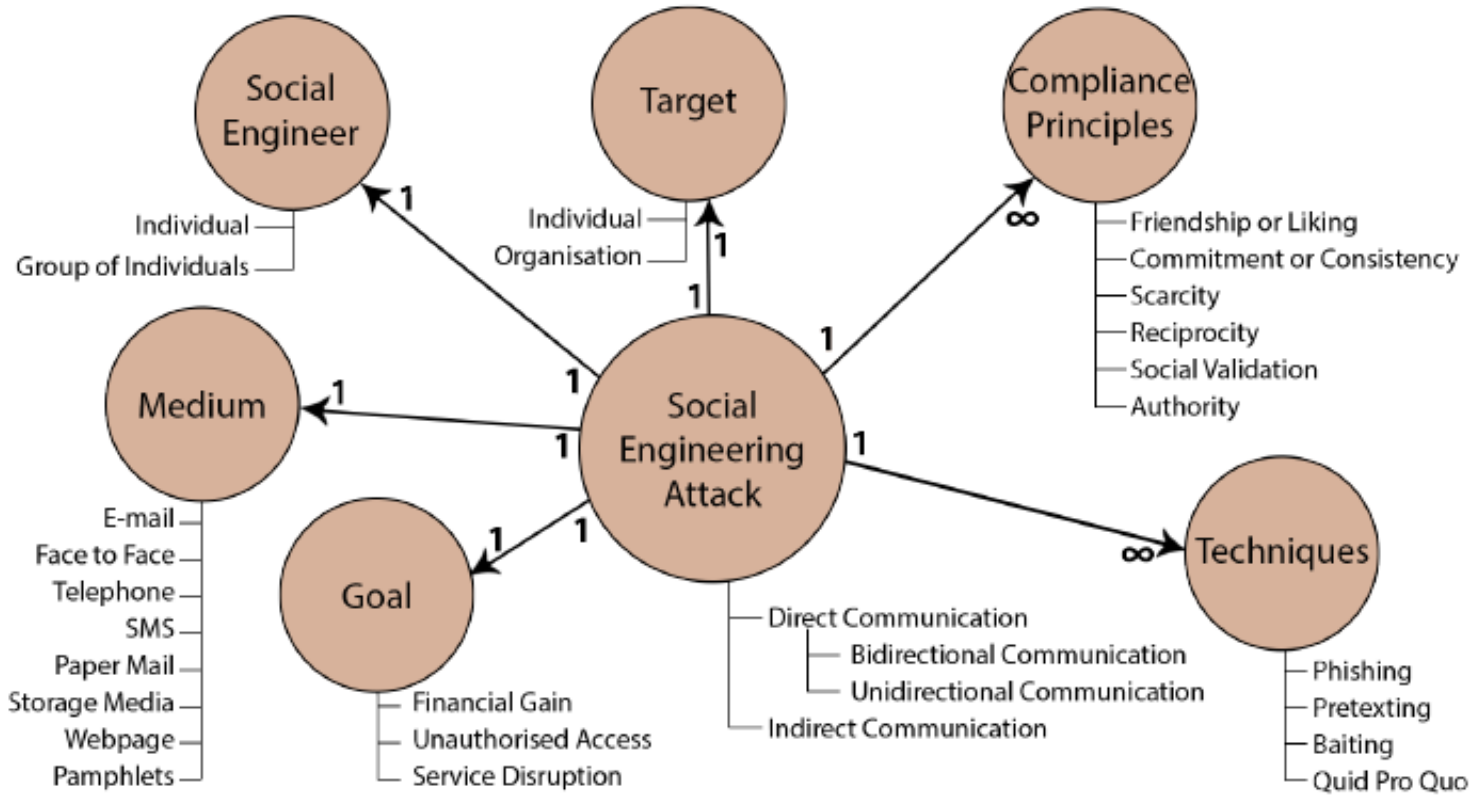


Fig 4. Ontological Model of (Mouton et al., 2014)

Target And Goals Of The Phishing Emails

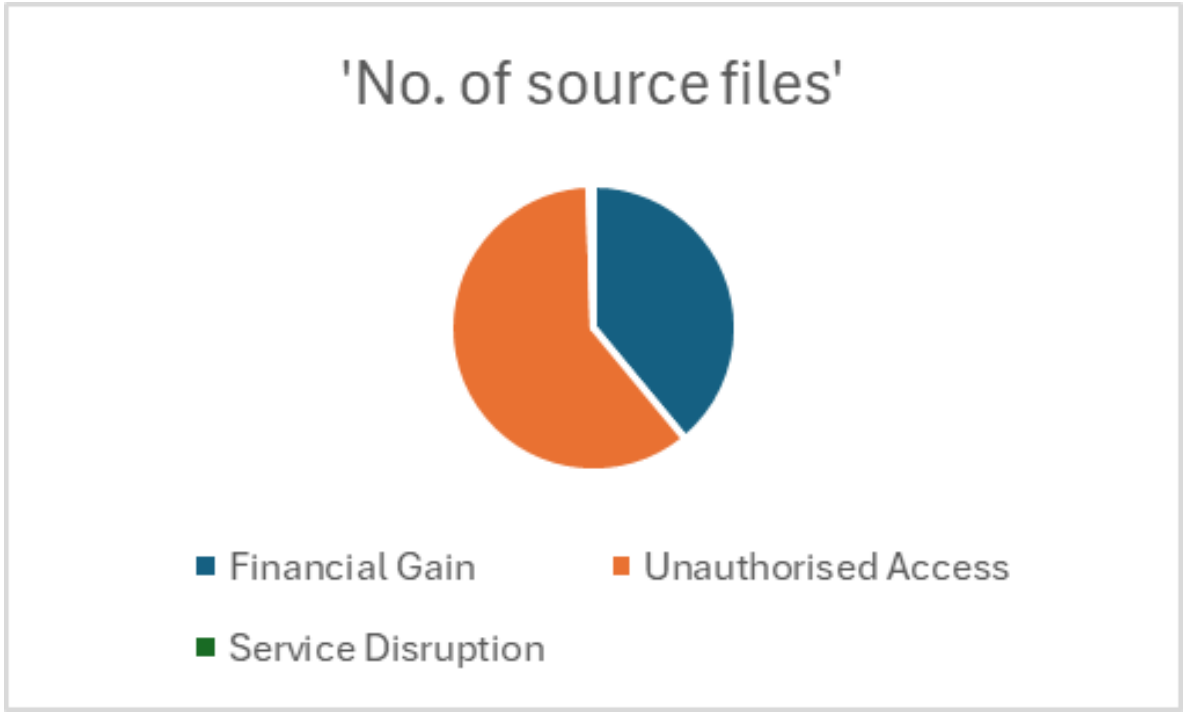


Fig 5. Goal of the phishing email samples

Conclusion

- **Extended Analysis of Persuasion in Phishing Emails**
- Built upon Ferreira & Teles (2019) by examining full email content.
- **Key Findings: Persuasion Principles**
- **Distraction** was the most prominent principle used in phishing.
- Followed by **Deception**, **Integrity**, and **Authority**.
- **Implications for Cybersecurity**
- A socio-technical approach is vital for effective phishing prevention.
- Knowledge of persuasive tactics is key to enhancing detection systems and user education.
- **Future Directions**
- Apply methodology to other social engineering attacks.
- Emphasize integrating behavioral insights with cybersecurity defenses.

References

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Questions??

Thank you.

kalam.Khadka@canberra.edu.au