Revisiting neutralization theory and its underlying assumptions to inspire future information security research

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Revisiting neutralization theory and its underlying assumptions to inspire future information security research

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ABSTRACT

Over two decades ago, neutralization theory was introduced to information systems research from the field of criminology and is currently emerging as an influential foundation to both explain and solve the information security policy noncompliance problem. Much of what we know about the theory focuses exclusively on the neutralization techniques identified in the original as well as subsequent criminological writings. What is often left unexamined in IS research is the underlying assumptions about the theory's core elements; assumptions about the actor, the act, the normative system, and the nature of neutralizing itself. The objective of this commentary is to revisit the origin of neutralization theory to identify its core assumptions and to lay a foundation for future IS research inspired by these assumptions. This paper points to five core assumptions: (1) The actor is an early-stage offender; (2) The act is shameful; (3) Neutralizing precedes and facilitates deviance; (4) Normative rules are disputable; and (5) Specific neutralization techniques are more relevant to specific violations. Ignoring these underlying assumptions could lead to a situation where we make unfounded claims about the theory or provide practitioners with harmful, rather than helpful, guidance.

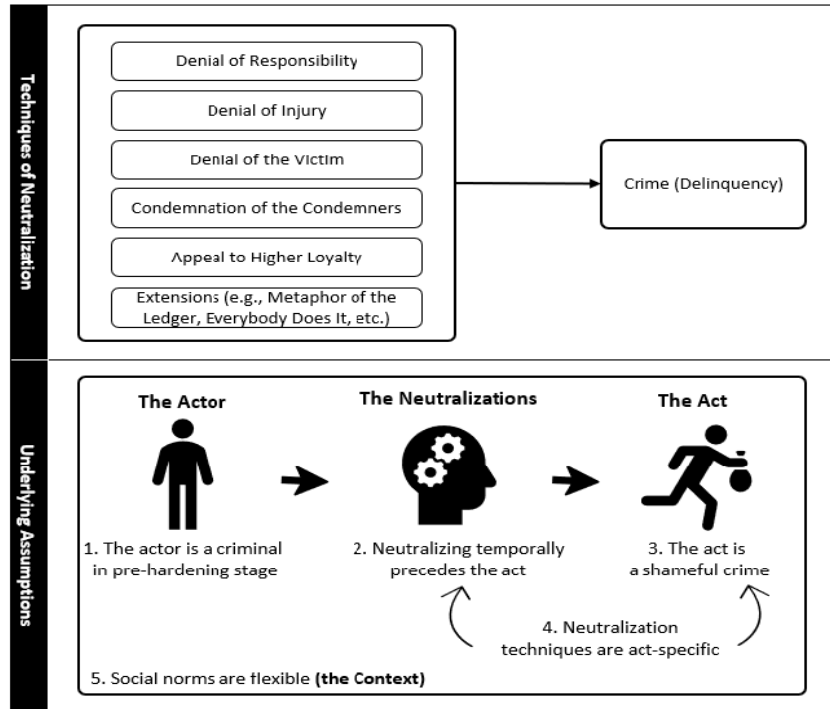**Keywords:** Neutralization theory, underlying assumptions, ISP violations.

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INTRODUCTION

Information systems security (ISS) researchers have borrowed neutralization theory (Sykes & Matza, 1957) from criminology because of its potential to provide an explanation and a solution to employees' information security policy (ISP) noncompliant behavior. As an explanation, neutralization theory is used to demonstrate that employees apply various techniques that liberate them from normative restrictions, thereby making policy violations easier to justify (Gwebu et al., 2019; Harrington, 1996; Khansa et al., 2017; Lim, 2002; Siponen & Vance, 2010). As a solution, neutralization theory is used to devise training programs tailored to the specific techniques with the aim of de-neutralizing them (Barlow et al., 2013, 2018; Siponen et al., 2020). Despite these very important efforts to advance our understanding of employees' ISS behavior, much of what we know about neutralization theory to date has ignored its underlying assumptions. For instance, a core assumption of the theory is that the offender is in an early criminal stage in which they still have high regard for the norms of society and believe in the wrongfulness of their action. Another core assumption is that the primary purpose of neutralization is to offset (hence, neutralize) feelings of shame or guilt that the deviancy brings upon the offender. In fact, without feelings of guilt or shame, there would be nothing to neutralize. To what extent these assumption (and others) have been recognized in existing ISP compliance and noncompliance research is an open question.

Several IS scholars have highlighted the importance of recognizing the underlying assumptions of theories we borrow from neighboring disciplines (Truex et al., 2006; Grover and Lyytinen 2015; Siponen et al., 2021). For example, Truex et al., (2006) have criticized that IS researchers often borrow theories from other disciplines "with little regard for the associated baggage of underlying assumptions" (p. 799). Lowry et al. (2017) have raised similar critique

and called the practice 'loose re-contextualisation'; that is, the tradition of borrowing a theory from a reference discipline without due consideration to its underlying assumptions. Failing to recognize the underlying assumptions may lead to weak theorizing at best (Grover et al., 2008), or theory misappropriation at worst, as argued by Johnston et al.'s (2015) assessment of the application of protection motivation theory (PMT) in information security context.

Figure 1. Neutralization theory: techniques and underlying assumptions

In this article, we provide an extensive review of seminal neutralization theory writings. Our analysis points to five core assumptions that are generally recognized and/or accepted by criminologists. As depicted in Figure 1, these assumptions are: (1) The actor is an early-stage offender; (2) The act is perceived to be shameful; (3) Neutralizing temporally precedes deviance; (4) Rules are disputable depending on context; and (5) Specific neutralization techniques are specific to certain deviances. By identifying and discussing these assumptions, we hope to inspire future ISS research in at least three directions. First, to sensitize researchers of the theoretical baggage that comes with applying neutralization theory in non-criminal contexts.

Second, to consider ways in which neutralization theory could be modified or adapted to fit the uniqueness of ISS research domain. Third, to inspire transforming the taken-for-granted assumptions into empirical research questions.

We suspect that ignoring these core assumptions in ISS writings may lead to situations where our research is inadvertently making claims about neutralization theory when, in fact, we are merely testing what Morris and Copes (2012) call "neutralization-like measures" (p. 445). If this worry is valid, we might be committing to a tradition of "brute empiricism and mechanistic replication" that Grover et al. (2008) warned against: "Another trap authors often fall into is to motivate propositions by referring to previous empirical findings rather than articulating a strong theoretical logic" (p. 42). Furthermore, on a practical level, not fully recognizing the theory's underlying assumptions may distort our understanding of both the ISP violation problem and the recommendations we propose as a solution.

NEUTRALIZATION THEORY REVISITED

Neutralization theory (Sykes & Matza, 1957) is one of the most popular and influential explanations of criminal behavior (Maruna & Copes, 2005). The original work on neutralization theory dates back to 1950s when Sykes and Matza (1957) published their influential article titled 'Techniques of neutralization: A theory of delinquency'. When this work was introduced, it was as an attempt to understand the world of crime among young (i.e., juvenile) Americans. Prior to the publication of this work, the dominant criminological theory rested upon the popular ideas of a clear division between the criminal and noncriminal (Maruna & Copes, 2005). Two lines of thought were particularly influential at that time: (a) the class-division perspective, and (b) the sub-culture perspective (Topalli, 2006). The first line of thought is traced to what Topalli (2006) calls 'sociological positivism', reflecting the belief that individuals are typically divided into

different social classes depending on the environments in which they are born in (e.g., uneducated parents, poor neighborhood, etc.). These social and economic conditions are thought to dispose the individuals to behave and view life in certain ways that are often incongruent with members of different social classes (Topalli, 2006). Class-division served as a foundation for the other perspective; that of sub-culture. The sub-culture perspective assumed that delinquents formed a world of their own (i.e., a sub-culture) that represented a complete inversion of the values held by society (Sykes & Matza, 1957). As such, this perspective rested upon the assumption that the criminal rejects the values imposed by middle-class standards, and instead adopt values and standards that deviate from the mainstream.

Sykes and Matza (1957) felt that this explanation was rather simplistic, especially that it rested upon the strong assumption that there is a clear demarcation between the two worlds: that of the law-abiding citizen, and that of the delinquent (Matza, 1964). They did not find this explanation satisfactory, most notably because the sub-culture view assumed that juvenile delinquents completely disregard the value system of society, and replace it entirely with their own, to the point that the delinquent viewed his or her crime as the 'morally correct' standard. If that was indeed the case, Sykes and Matza (1957) argued, then there would be no reason to believe that crime brings shame or guilt to those who commit it. However, "many delinquents *do* experience a sense of guilt or shame, and … [these feelings should not] be dismissed as a purely manipulative gesture to appease those in authority" (pp. 664-5, *emphasis* original). Sykes and Matza (1957) challenged the dominant sub-culture view and argued that young delinquents are "partially committed to the dominant social order" (Sykes & Matza, 1957, p. 666), and that this partial commitment is what drives them to utilize different neutralization techniques that dulls the feeling of shame that comes with engagement in anti-social, deviant behavior.

Sykes and Matza's (1957) work resulted in the identification of five popular pre-crime guilt-neutralizing mechanisms, which they called techniques of neutralization. These are, 'denial of responsibility', 'denial of injury', 'denial of victim', 'condemnation of condemners', and 'appeal to higher loyalties'. Later research in criminology has proposed further techniques that offenders could deploy for neutralization purposes. 'Metaphor of the ledger' (Klockars, 1974), 'defense of necessity' (Minor, 1981), 'claim of individuality' (Henry & Eaton, 1999), 'justification by postponement' (Cromwell & Thurman, 2003), 'claim of entitlement' (Coleman, 1998), 'everybody does it' (Coleman, 1998), and 'claim of relative acceptability' (Henry & Eaton, 1999) are among the techniques that have been developed in addition to the initial five techniques.

CORE ASSUMPTIONS UNDERLYING NEUTRALIZATION THEORY

Based on a careful reading of seminal neutralization theory writings (Benson, 1985; Cromwell & Thurman, 2003; Maruna & Copes, 2005; Minor, 1981, 1984; Sykes & Matza, 1957) we take a closer look at five core underlying assumptions of neutralization theory. These assumptions are: (1) The actor is an early-stage offender; (2) The act is perceived to be shameful; (3) Neutralizing temporally precedes deviance; (4) Rules are disputable; and (5) Specific neutralization techniques are specific to certain deviances. We discuss each of these assumptions next.

1. The actor is an early-stage criminal

Who needs neutralizing? When Sykes and Matza (1957) first introduced their theory, the focus of their theorizing was explicitly on the young criminal. This may be understood either literally or metaphorically. First, those who take this assumption literally point to Sykes and Matza's (1957) emphasis on adolescent criminals. Researchers in this domain focus explicitly on

understanding crime among the young, for example, 'high-risk youth' (Morris & Copes, 2012) and 'undergraduate students' (Agnew & Peters, 1986; Minor, 1981). In the original writing of the theory, Sykes and Matza (1957) used terms like 'juvenile' (mentioned 19 times in their seminal article), 'child' (mentioned 8 times), 'adolescent' and 'youthful offender' to communicate to the reader that their theorizing is concerned with offender in an early development stage, rather than someone who reached adulthood and became a "hardened gangster" (p. 665).

Aside from a literal interpretation for being young, early-stage criminals may also be understood metaphorically to describe criminals who, regardless of age, are in their early stages of criminality and have not yet committed themselves to the life of crime (i.e., non-hardcore criminals; see, Topalli, 2005). This is probably the more prevalent interpretation for studies of crimes within organizations, such as white-collar crimes (Benson, 1985; Hollinger, 1990; Stadler & Benson, 2012). Indeed, it is reasonable to argue that employees need to neutralize when they commit violations that run against the value system they are committed to. Cromwell and Thurman (2003) further argued that "[t]his appears to be particularly true for white-collar offenders whose otherwise conventional life-styles and value systems would not ordinarily countenance criminal involvement" (p. 538). Adopting the nonliteral interpretation makes it reasonable to accept that a norm violator needs to neutralize for as long as they are in an early-stage offender (Minor, 1981). Once they become fully committed to crime, the conventional norms of society become irrelevant.

On a theoretical level, this interpretation is more relevant since it relieves the conflict between neutralization theory and the sub-culture view. That is, instead of portraying neutralization theory as a rival/competing explanation of crime over the sub-culturist's, it could

be seen as an explanation to crime that happens at a prior stage on a criminal path or career. Minor (1981) refers to this development as "the hardening process thesis" (p. 301). He clarifies:

"[N]eutralization [may be considered as] a facilitating element in the gradual (or not so gradual) process of becoming committed to unconventional norms. In early stages of delinquency or pre-delinquency, a youth may need to neutralize or rationalize in order to bring his values and his behavior into agreement. Doing so, however, weakens his commitment to those values … until finally he no longer needs to neutralize." (Minor 1981, p. 301)

Morris and Copes (2012) accepted this thesis and described the hardening process as a "process whereby early neutralizations and continued deviance lead to a weakening of conventional belief systems and a strengthening of delinquent ones. Consequently, the need to neutralize is diminished" (p. 446). In other words, when the hardening process is complete the offender adopts the nonconventional morality as the dominant frame of reference, and there would be no need to neutralize.

2. Neutralizing precedes deviant behavior

When does neutralizing happen? This question about temporality points to one of the fundamental assumptions about the facilitating role of neutralizing in the commission of deviant behavior (Sykes & Matza, 1957). According to Minor (1981), "[b]y definition, neutralization … must precede such deviant behavior" (Minor, 1981, p. 303). Surprisingly, despite its central role in the theory, this assumption has received little attention in the literature (Agnew, 1994; Benson, 1985; Morris & Copes, 2012). To illustrate the importance of this assumption, Benson (1985) warns the readers to not confuse *pre-crime neutralizing* with *post-crime rationalizing*. Having said that, it must be noted that neutralizing "does not in and of itself result in illegal behaviors. Neutralizations simply reduce the usual constraints against such behavior" (Pearson & Weiner,

1985, p. 137). In this sense, the only role of neutralizing is to temporarily lower the shield of self-restraint thus allowing the crime to happen.

To further clarify this assumption Minor (1981) argued that in neutralizing is only relevant in situations where early-stage delinquents (Assumption #1) have strong belief in the normative code; yet they are strongly motivated to violate it, and therefore need a way to justify their actions to themselves. However, Sykes and Matza (1957) have argued that their primary concern was with justifications that come before the act – that is, they "precede deviant behavior and make deviant behavior possible" (p. 666). Minor (1981) understood this assumption well, and argued that as far as neutralization theory is concerned, the neutralization techniques are used as a pre-crime deliberation process where a delinquent manages to convince her- or himself of the justifiability of the violation, despite its wrongness (Minor, 1981; Sykes & Matza, 1957).

A central argument that distinguishes (pre-crime) neutralization from (post-crime) rationalization is rooted in the notion of premeditation. Evidently, not all crimes are premeditated (e.g., as in impulsive crimes) and "[n]eutralization would not be a factor for those who *impulsively* commit offenses of which they disapprove …, but these persons would be expected to **rationalize their behavior afterward.**" (Minor, 1981, p. 300, emphasis added).

3. The norm-breaking act is shameful

What acts require neutralizing? A cornerstone of neutralization theory (Sykes & Matza, 1957) is that delinquents in an early criminal stage uphold beliefs in the conventional morality (see Assumption #1), thus perceives breaking these norms as immoral and shameful, and carrying them out would instigate feelings of guilt and distortion to self-image. Shame or guilt in this sense is rooted in what Sykes and Matza (1957) describe as a "paradoxical fact" (p. 666): on one hand, recognizing and upholding the values of conventional morality; and on the

other hand, intentionally violating these values. Pre-crime neutralizing in this case works as an effective mechanism to resolve this paradox, thus facilitating the crime (see Assumption #2). The primary purpose of neutralization is to offset (hence, neutralize) feelings of shame or guilt that is associated with crime. Cromwell and Thurman (2003) point out, "should delinquents fail to internalize conventional morality, neutralization would be unnecessary since there would be no guilt to neutralize" (p. 537).

In a similar vein, Topalli (2005) argues that the "underlying assumption of neutralization theory was (and is) that delinquents, despite their involvement with offending, maintain a strong bond to conventional society and are invested in maintaining a perception of themselves as good." (p. 798). In other words, from neutralization theory perspective, one could argue that offenders who do not find the violation act shameful or guilt-inducing, do not need to neutralize. Note that guilt may be experienced when an offender understands that they are engaging in an activity that is counter to their own moral beliefs, and these may or may not be illegal (Baumeister et al., 1995; Pershing, 2003). Most importantly, the absence of guilt is an indicator of two types of offenders. On the one hand, not experiencing guilt when committing a crime is a sign of a "hardcore criminal" (Topalli, 2005); a criminal who completed the hardening process (see Assumption #1). On the other hand, not experiencing guilt is also a sign of a "martyr" (Sykes & Matza, 1957); a deviant who believes in the "rightfulness" of their deviancy, for example, "conscientious objectors during World Wars I and II" (Sykes & Matza, 1957, Footnote 8, p. 664). The absence of guilt in these two cases makes them beyond the scope of neutralization theory (Sykes & Matza, 1957).

4. The coupling between neutralization techniques and acts

Are all neutralization techniques suitable to all types of crime? The coupling assumption postulates that certain neutralization techniques are expected to be more or less relevant to specific crimes or violations. The coupling assumption is recognized by many neutralization theory researchers (Agnew, 1994; Agnew & Peters, 1986; Benson, 1985; Copes et al., 2007; Morris & Copes, 2012). Criminologists have emphasized the importance of this assumption and criticized vagueness in studies that do not make clear linkage between specific neutralization techniques and specific crimes. For instance, Agnew (1994) emphasized the importance of "focus[ing] on beliefs regarding particular types of deviance, rather than beliefs regarding deviance in general." (Agnew, 1994, p. 556). In Sykes and Matza's (1957) original work they argued that "certain techniques of neutralization would appear to be better adapted to particular deviant acts than to others" (p. 670).

To illustrate the assumption, Sykes and Matza (1957) gave the example of property crime and noted that the most suitable neutralization technique is the denial of the victim. Maruna and Copes (2005) noted that violent crimes and property crimes are two distinct types of crimes that call upon different neutralization techniques. Furthermore, Copes and colleagues (2007) have acknowledged that "offenders do not have a general acceptance of neutralizations that they carry around with them" (p. 447). They further explain, "neutralizations are crime-specific and are used in specific situations and contexts, depending on the type of crime that is being or has been committed" (p. 447). Researchers on white-collar crime have also recognized this assumption (Benson, 1985). Based on his work with convicted white-collar offenders, Benson (1985) concludes that white-collar criminals develop neutralizations that are "delimited by the type of offence committed, its mechanics, and its organizational context" (p. 585). Most importantly,

Benson's (1985) work suggests that offenders used different neutralization techniques depending on the type of crime in question.

5. Rules and norms are disputable

Are all neutralizations bad (excuses)? One of the often-forgotten core assumptions of neutralization theory addresses the flexible nature of rules and norms. Sykes and Matza (1957) remind us that rules and norms should not be taken as categorical imperatives; rather, it is best to think of them as "*qualified* guides for action, limited in their applicability in terms of time, place, persons and social circumstances" (p. 666, *emphasis* original). Overlooking this assumption paints all neutralizations with the same brush, and frames neutralizing as a bad, crime-facilitating practice that ought to be eliminated (i.e., de-neutralized). This view, however, contradicts what neutralization theory intended. In their writings, Sykes and Matza highlighted in various occasions the complexity stemming from the interpretive flexibility of the normative system where delinquency occurs. This is particularly the case when "the quality of the values is obscured by their context" (Matza & Sykes, 1961, p. 715). For instance, acts of resistance against a tyrant oppressor are most likely to be interpreted differently (whether justified or not) depending on whose side the interpreter is (Matza & Sykes, 1961).

Recognizing the disputable nature of norms allows researchers a finer level of understanding of the complexity of rule formation and violation. This assumption, for instance, sensitizes us to the conflict that may arise from co-existence of formal and informal regulative structures, since in some situations they could lead to varying interpretations regarding the legality and morality of an act. Benson (1985) for instance, points out that "… an informal structure exists below the articulated legal structure, one which frequently supersedes the legal structure. The informal structure may define as moral and "legal" certain actions that the formal

legal structure defines as immoral and "illegal."" (p. 593). The flexibility of the normative system makes it inevitable to accept that the same act may be seen as 'good' or 'bad', as 'right' or 'wrong', and as 'justified' or 'unjustified' depending on the context or perspective. The main issue Sykes and Matza (1957) want to emphasize here is that rules can be fluid in flexible normative systems. Indeed, history is rich with examples where one act is considered legal, then becomes illegal, then becomes legal again. The prohibition period on alcohol in the United States in the 1920s is one of the more popular examples. Furthermore, Sykes and Matza (1957) viewed neutralizations as extensions of the typical 'defenses to crime' or 'pleas', which are integral part of criminal law. Typical acceptable pleas (i.e., defenses) include 'nonage, necessity, insanity, drunkenness, compulsion, self-defense, and so on" (p. 666). Considering a plea as a permissible (justification) or a dismissible (excuse) depends greatly on whether or not the legal system or society at large finds the plea valid (Scott & Lyman, 1968). Sykes and Matza (1957) write:

"*It is our argument that much delinquency is based on what is essentially an unrecognized extension of defenses to crimes, in the form of justifications for deviance that are seen as valid by the delinquent but not by the legal system or society at large*" (p. 666).

Had norms of society and moral rules been rigid and absolute, neutralizations would not exist at all. Utilizing techniques of neutralization in such an environment would not offer a refuge from the sense of self-blame associated with the action, as the action could not under any circumstances be considered permissible. In the absence of normative flexibility, no amount of neutralizing will redefine a categorically deviant behavior. In an environment marked by normative flexibility, justifications to norm violation may be honored or rejected depending on the context and background expectations (Scott & Lyman, 1968). Without due process and

examining the validity of the violators' pleas, we might unduly dismiss all neutralizations as bad,

including the good ones (Maruna & Copes, 2005).

DISCUSSION AND CONCLUDING REMARKS

In this article, we provided an overview of five assumptions underlying neutralization

theory that are generally recognized in its original domain: criminology (see Table 1 for a

summary). This article is intended to inspire future ISS research in at least three directions.

Table 1. Summary of neutralization theory's underlying assumptions

Assumption	Description
1. Neutralization techniques are used by young offenders.	Criminologists have espoused this assumption either literally or metaphorically. Those who take this assumption literally put emphasis on age through the use of terms 'juvenile', 'child', and 'adolescent' (Sykes and Matza, 1957). Those who take it metaphorically, focus on criminals who, regardless of age, are in their early stages of offending; drifters who have not yet accepted deviance as the new norm (Minor, 1981).
2. Neutralizing temporally precedes deviance and is not a post-offense excuse.	Criminologists have long advised to not confuse pre-crime neutralizing with post-crime rationalizing. For instance, Benson (1985) writes: "It is important to distinguish between neutralizations that cause or allow an offense to be committed and accounts that are developed afterwards to excuse or justify it" (p. 587).
3. The rule-breaking act instigates shame, guilt and distortion to self-image when committed.	The primary purpose of neutralization is to offset (hence, neutralize) feelings of shame and guilt that are associated with crime (Sykes & Matza, 1957). Voicing this assumption, Cromwell and Thurman (2003) point out that "should delinquents fail to internalize conventional morality, neutralization would be unnecessary since there would be no guilt to neutralize" (p. 537).
4. Specific neutralization techniques are more suitable to specific violations than others.	It is not enough to argue that neutralization precedes or facilitates crime. Instead, we should be able to tell which neutralization technique(s) precede(s) which crime. Morris and Copes (2012) have noted that many neutralization studies support the claim that neutralizations are crime-specific, and that this assumption should influence how the theory is understood and tested.
5. Rules are disputable depending on violation context.	Sykes and Matza (1957) highlighted in various occasions the complexity stemming from the interpretive flexibility of the normative system where delinquency occurs. Such flexibility makes it inevitable to accept that rules are not "categorical imperatives" (p. 666): the same act may be deemed as 'good' or 'bad', and as 'right' or 'wrong', depending on the context or perspective.

Our first objective is to sensitize researchers of the theoretical baggage that comes with applying neutralization theory in non-criminal contexts. Take for instance the normative fluidity assumption (Assumption #5). Careful reading of the ISS application of neutralization theory reveals that the normative flexibility issue remains unrecognized. In fact, we find that most ISS studies applying neutralization theory have put little effort to examine the extent to which the violation-justifications given by the study participants might be good (i.e., deserving of acceptance) rather than mere excuses (i.e., deserving of dismissal). Here, the studies seem to outright deny that any justifications for organizational rule violations could have valid reasoning. The language of justification in ISS research is typically characterized as a "maladaptive behavior" used by employees to "rationalize their inappropriate security behaviors" (Burns et al., 2017, p. 195). Such studies encourage users to avoid any form of justification (Barlow et al., 2018). From this perspective, it is common to advise managers "to stress [to their employees] that there is no excuse for IS security policy non-compliance, even if the employees are not sure what the policy is or if they don't fully understand it" (Siponen & Vance, 2010, p. 497). But what if employees' justifications for violating a given policy are valid? For instance, in some contexts, employees violate poorly designed security policies to save lives. Not only does ignoring the normative flexibility of context violate a core assumption of neutralization theory, but also can lead to situations where employees are discouraged to criticize genuine problems in the policy that deserve rethinking the security procedures, rather than correcting the employee's behavior (Hassidim et al., 2017).

Our second objective is to initiate a dialogue about the different ways in which neutralization theory could be modified or adapted to fit the uniqueness of ISS research domain. Are some assumptions more important than others? Can we suspend some assumptions and still

call it a neutralization-theory-based study? Can we suspend all five of them all? Can we introduce new assumptions that clearly contradict one or more of the original assumptions? While we do not offer answers to these questions, we believe that they serve as a basis for fruitful discussion on future ISS research applying neutralization theory.

Our third objective is to inspire a research program that transforms these taken-for-granted assumptions into empirical research questions. Take for instance the actor's criminality stage assumption (Assumption #1). This assumption could inspire several research directions that take the hardening process as the center research design. One research direction may consider the literal interpretation of the assumption. As noted earlier, neutralization theory was originally developed to explain deviance among minors (Sykes & Matza, 1957). From this perspective, future ISS research could examine how young organizational members (e.g., freshmen) neutralize certain ISP violations compared to their older and more mature counterparts (e.g., seniors). Furthermore, research could take a developmental approach by exploring how the use of neutralization techniques among young ISP violators evolve over time. A second research direction may take a less literal interpretation route of the young offender, that is, by arguing that the violator is in an early stage of criminal activity (e.g., not yet a hardcore criminal). Therefore, in using neutralization theory as a lens for examining ISS behaviors, future research could consider process and stage modeling approaches (Langley, 1999; Pentland, 1999) which would help in understanding the stages that employees go through with relation to their policy violations.

Finally, neutralization theory is emerging as one of the most popular theories to inform ISS research and its application deserves a careful examination the theory's underlying

assumptions. Recognizing both the limitations and opportunities these assumptions introduce to

ISS research is a crucial first step towards improving our theoretical and practical posture.

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