

整合使用者心理特性、SIDE 及遏止 理論探討網路使用者去抑制化行為

Applying User's Psychological Characteristics, SIDE and Containment to Explore the Antecedents of Online Disinhibition

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摘要

本研究以遏止理論（Containment）與社會認定去個人化行為(SIDE)為調節變項建構去抑制化行為影響因素的研究模型來探討：（1）網路的使用者心理認知特性因素(匿名性、無形性、非同步性、自我投入、分離的想像認知、低特權認知)對網路使用者去抑制化行為的影響（2）內部遏止因素（道德義務）與外部遏止因素（嚇阻理論）是否會對網路使用者去抑制化行為有調節效果（3）SIDE 理論組織規範強度是否對網路使用者去抑制化行為有調節效果。本研究從某大學隨機抽取五個系 500 位學生發放問卷，回收問卷中，有效問卷計 488 份。資料分析顯示在未加入調節變數前，網際網路使用者心理特性對去抑制化行為有顯著影響。加入調節變數後，本研究提出之三個調節變數 SIDE：團體規範、內部遏止：道德議題與外部遏止：嚇阻理論，均有顯著調節效果。網路使用者對團體規範的認同強度對使用者心理特質與去抑制化行為之關係具有顯著正向調節效果，而內部遏止：道德強度與外部遏止：懲罰強度則有顯著反向調節作用。本研究結果可解釋為網路使用者會因網路的匿名性、無形性或變換身份不被發現而產生網路去抑制化行為，但若網路上的去抑制化行為不為所屬群體組織認同，或使用者認為網路上的去抑制化行為是會對別人造成傷害，或認為去抑制化行為是不禮貌的行為，或認知到網路上不當言論行為會受到及時嚴厲懲罰時，網路去抑制化行為的強度會減弱。目前教育單位全面提倡網路 e 化，網路普及化確實帶給學校很多便利性，卻也相對帶來一些困擾。建議學校當局加強學生網路公民規範教育，讓網路上的不當行為不被同儕認可，可降低網路上去抑制化行為。同時亦應讓學生們瞭解即使在網路使用者的個人資料與特質不易為他人發現，仍應與一般生活上一樣維持應有的禮儀。

關鍵詞：網際網路使用者心理特性、去個人化的社會認定模式、遏止理論、網路去抑制化行為

Abstract

In this study we constructed a comprehensive model integrating diverse factors by synthesizing different perspectives. We then proceeded to examine and integrate the following important aspects : (1) the internet psychological characteristics (dissociative anonymity, invisibility, asynchronicity, solipsistic introjection, dissociative imagination and minimization of authority); (2) the social identity model of deindividuation effects (SIDE) in which group norm; and (3) the containment theory in which punishment and moral issues in this research model, whereas containment as well as SIDE are treated as moderating roles of toxic disinhibition. Survey and expert interview methodologies were applied to test the research model, and four hypotheses were developed in this study. Five hundred questionnaires were collected from university students, among which 488 responses were valid while 12 were not. The result of this study supported all four hypotheses proposed by this study. Internet psychological characteristics positively influenced the behaviors of toxic disinhibition. Punishment, moral intensity negatively moderated the relation between Internet psychological characteristics and the toxic disinhibition behaviors online while social norms had positively moderating effect on the relation between Internet psychological characteristics and the toxic disinhibition behaviors online. Internet users hide their real identities when they behave inappropriately on internet, but once they acknowledge that the disinhibition behaviors will be punished certainly or severely, resulting in expulsion by the group they belong to, the disinhibition behaviors will be weakened. Thus, we proposed that to prevent the toxic disinhibition behaviors occurring on the Internet especially for the university students, it is important to advocate relative laws, norms and ethics of Internet behaviors on campus.

Keywords: The Social Identity Model of Deindividuation Effects, Containment Theory, Internet Psychological Characteristics, Toxic Disinhibition

1. INTRODUCTION

With the widespread use of technology, people rely on computers and electronic devices more and more. Online communication frameworks are showing heavy usage and rapid growth over the last decade; computer bulletin boards, instant messaging, video chats and social networks are just a few examples of that. Such frameworks have become convenient for large groups of internet users who can connect with one another from their home computers, laptops or mobile smart phones. One phenomenon that has been shown to be characteristic of online communication participants is the online disinhibition effect, defined as a lowering of behavioral inhibitions in the online environment (Lapidot-Lefler & Barak, 2012).

Computer-mediated communication (CMC) has since been found to have a correlation with uninhibited behaviors among users (Kiesler et al., 1985). Many of the human behaviors displayed online (including violence, incitement, flaming, and verbal attacks, on the one hand, and self-disclosure, kindness, and the dispensing of help and advice, on the other) may be attributed to the online disinhibition effect.

In previous studies, it has been argued that behaviors on the internet differ from similar behaviors in the "real world" (Joinson, 1998). Such uninhibited or anti-normative online behaviors are sometimes interchangeable with other terms like "flaming" (Lea et al., 1992) and encompass behaviors ranging from being impolite to using capital letters or exclamation marks and expressing personal feelings toward another person using a computer network (Kiesler et al., 1985). Besides, Lapidot-Lefler & Barak (2012) point out that the negative online disinhibition effect is the concept used to refer to the negative results of this loss of inhibition usually manifest in aggressive behaviors that apparently are not exhibited in a similar scenario in the "real world." Suler (2004) call this anti-normal behavior on the internet -- visiting places of pornography, crime, and violence, which are fields people might never explore in real life--the "toxic disinhibition." Thus, the online disinhibition in this research is defined as the degree to which people have antisocial behaviors, such as rude language, harsh criticisms, aggressive statements, or offensive comments online.

This research tried to explore significant factors that explain why people feel uninhibited and behave in deviant ways online. Although there are many policies to avert illegal behaviors in cyberspace, many people still think that they are safe behind the computer. Of all research studies centering on Internet attributes related to toxic disinhibition, Social Presence Theory (Short et al., 1976) and Reduced Social Cue Theory (Sproull & Kiesler, 1986) are often cited. Besides these two, the seductive properties of Internet are also a key feature when making prediction of Internet behaviors (Turkle, 1984; Leung, 2003). Controllability, referring to the controlling power one feels he holds over the simulated world on the Internet, also results in less inhibited behaviors (Schouten, 2007). Fluidity of identity is yet another distinctive Internet attribute which, due to the anonymity and dissociative imagination linked with Internet use, creates and triggers anti-normative behaviors. (Reicher et al., 1995; Postmes & Spears, 1998)

Although some prior researches already explored the reasons for the toxic disinhibition, they mostly concentrated on specific factors or single angles. Suler (2004) proposes six characteristics which integrate psychological factors and network characteristics may cause toxic disinhibition. He believes that one or two of them produces the lion's share of the disinhibition effect. In most cases, however, these factors intersect and interact with each other and supplement each other, resulting in a more complex, amplified effect. The six characteristics are dissociative anonymity, invisibility, asynchronicity, solipsistic introjection, dissociative imagination, and minimization of status and authority. Because these studies are mostly qualitative researches and not verified, we mainly used these six internet psychological characteristics to explore if these factors led to toxic disinhibition.

Furthermore, traditional theories of deindividuation state that people decrease private self-awareness, decreased self-regulation, and decreased self-evaluation causing antinormative and disinhibited behaviors in a group (Festinger et al., 1952; Zimbardo et al., 1969; Diener, 1980), and it would make people behave uninhibitedly and in a less anti-normative way (Postmes & Spears, 1998). If there is evidence for disinhibition among CMC users, the explanation for such disinhibition becomes vitally important. If individuals are deindividuated while on

line (Kiesler et al., 1984), according to deindividuation theory, their behaviors will be characterized by increased hostility and reduced self-regulation (Zimbardo et al., 1969). We use social identity model of deindividuation effects (SIDE) as this study's social dimension. The SIDE model points out that anonymity of network lack visual clues, netizens tend to pay attention on individual idiosyncrasies, they transfer to the social characteristics of the group's members (Reicher et al., 1995). Since environmental dimensions are also very important factors that arouse online disinhibition, this study adopt containment theory as environmental factors. Containment theory assumes that for every individual a containing external structure as well as a protective internal structure exists. Both buffer, protect, and insulate an individual against delinquency (Reckless, 1961). Based on network psychological factors, we studied these social and environmental factors as moderators to observe whether these factors would affect toxic disinhibition or not?

We integrated six internet psychological characteristics, SIDE model, and containment theory to propose an innovative model which can make up for the shortcomings of the previous studies on online disinhibition effect. Currently, electronic media such as e-learning, distance education via internet and synchronous online teaching diversify teaching methods but also result in some negative behaviors such as internet bullying and flaming. This study tried to find the significant factors that affect the students' online toxic disinhibition.

With the goal to pinpoint the key elements in determining toxic disinhibition, this research intended to accomplish the following objectives:

- 1) Integrating the roles of internet attributes, environment factors and psychological factors, this study provides an innovative conceptual model in which SIDE and containment theory are integrated and thus viewed to play important moderating roles, instead of being just another antecedents;
- 2) Building an integrated research model that synthesizes different aspects to explain the relationship between toxic disinhibition and internet attributes, and their influences on internet attributes and toxic disinhibition

2. LITERATURE REVIEW

2.1 Disinhibition

Lea claims that disinhibition includes flaming behaviors or hostile communication (Lea et al., 1992) and encompasses behaviors such as being impolite and expressing personal feelings toward another person using a computer network (Kiesler et al., 1985). Joinson (1998) argues that if inhibition arises when behaviors are constrained or restrained through self-consciousness, anxiety about social situations, worries about public evaluation and so on (Zimbardo, 1977), disinhibition can be characterized by an absence or reversal of these same factors. Thus, Joinson characterizes disinhibition by an apparent reduction in concerns for self-presentation and the judgment of others. In other words, disinhibition refers to when a person's behavior is no longer controlled by concerns about self-presentation or judgments by others (Joinson, 1998). Also, reduced self-presentation is obviously in the eye of the beholder, allowing researchers to apply their own views of what is "abnormal" to the behavior of those they study (Joinson, 2007).

Others focus on the effect of disinhibition. Compared to the behaviors in the real world, people may do or say differently from in the network space. They feel relaxed, express themselves much more openly, and their behaviors are more uninhibited. Thus, researchers call this general phenomenon as the online disinhibition effect (Suler, 2004). In addition, the online disinhibition effect is a powerful mechanism that operates in interpersonal interactions in cyberspace, influencing people to act in ways they apparently would not have acted in their physical environment (Barak et al., 2008). Uninhibited behavior will occur more often in computer-mediated communication (CMC) than in face-to-face communication (Kiesler et al., 1985).

This disinhibition effect can be separated into two opposite directions, benign disinhibition and toxic disinhibition. It is called benign disinhibition when people disclose their fears, desires, and secret emotions as well as show some acts of kindness and open-handed out of ordinary. In online support groups, benign

disinhibition might have productive or detrimental value. However, the anonymity of Computer-mediated communication (CMC) often brings about less control in people so that they feel more uninhibited, and many kinds of rude language, critical opinions, anger, the feelings of hostility, even threats have been observed. It is called toxic disinhibition (Suler, 2004). Toxic disinhibition describes phenomena of online flaming and acting-out that often involve damaging others' or even one's own self-image, without any beneficial personal growth (Lapidot-Lefler & Barak, 2012).

2.2 Internet psychological characteristics

Suler (2004) propose that some elements of the cyberspace result in online disinhibition, such as dissociative anonymity, invisibility, asynchronicity, solipsistic projection, dissociative imagination, and minimization of authority. The relative anonymity and the lack of the usual "gating features" of Internet interactions greatly reduce the risks of such disclosure, and one can share intimate aspects of the self with much less fear of disapproval and sanction (McKenna & Bargh, 2000). In addition, some other researches also argue that the Internet represents a place where they can exercise greater control over the impression that others form of them (Grayson & Schwartz, 2000; Stritzke et al., 2004; Suler, 2004). Turkle suggested two dimensions worthy of consideration: (1) the pleasure of control (i.e., the pleasure of being able to control the simulated world inside the computer such as in video games or online games), and (2) the perceived fluidity of identity in online life (i.e., the anonymous nature of chat rooms and ICQ, which allows participants to disguise their true identity in their interaction) (Turkle, 1984, 1994).

According to Suler (2004), six factors interact with each other and cause online disinhibition effect: dissociative anonymity, invisibility, asynchronicity, solipsistic introjection, dissociative imagination, and minimization of authority. The negative online disinhibition usually manifested in aggressive behaviors that apparently would not be exhibited in a similar scenario in the "real world" (Lapidot-Lefler & Barak, 2012). So, this research used these six internet

psychological characteristics to examine what factors cause toxic disinhibition.

2.2.1 Dissociative Anonymity

In the cyberspace, people have the opportunity to protect their real world identities from the occurrences; they feel less vulnerable about participating and opening up. Whatever they say or do cannot be directly linked to the rest of their lives. People only know what the other people choose to reveal the information about themselves (Barak et al., 2008). Dissociative anonymity enables an individual to express himself or herself and do some behaviors that are not available in one's usual social fields, both because a person feels free of the expectations and constraints placed on him by those who know him, and because the costs and risks of social sanctions for what he says or does are greatly reduced (Bargh et al., 2002). Therefore, anonymity indicates people can have no name or at least not their real names (Suler, 2004). Furthermore, Lapidot-Lefler & Barak (2012) also argue that anonymity creates an unidentifiability aspect. The unidentifiability factor refers to the realistic condition of being unknown to online partners in terms of identifying personal details, such as gender, weight, age, occupation, ethnic origin, residential location, and so on. In the case of expressed hostilities or other deviant behaviors, the person can avoid responsibility for those behaviors, almost as if superego restrictions and moral cognitive processes have been temporarily suspended from the online psyche. In fact, people might even convince themselves that those online behaviors "aren't me at all."

2.2.2 Invisibility

Invisibility is related to anonymity, but they are two distinct variables. Invisibility renders irrelevant stereotypes and prejudices related to gender, age, skin color, physical attributes (e.g., weight, height, and general appearance), stigmatizing behaviors, and physical and sensory impairments (Lapidot-Lefler & Barak, 2012). This invisibility gives people the courage to go places and do things that they otherwise wouldn't. People don't have to worry about how they look or sound when they type a message (Suler, 2004). In face to face communication, how

others look or sound in response to what they say to others would otherwise inhibit people (Suler, 2004). Yet, in text communication, people cannot see the frowns, shaking heads, sighs, bored expressions, or other incalculable and obvious signs of disapproval and indifference (Barak et al., 2008). Therefore, people do not worry about the feeling of others, and they are willing to express their point of view.

2.2.3 Asynchronicity

In face-to-face communication, we see people's reactions to what say or do immediately. On the other hand, in text communication such as e-mails and message boards, the interaction is asynchronous. People do not interact with each other in real time. Others may take minutes, hours, days, or even months to reply. According to Suler (2004), immediate, real-time feedback from others tends to have a very strong effect on the uninterrupted flow of how much people disclose about themselves. With online communication tools, for instance, because there are delays in e-mails and message boards when people give a feedback, people talk about their thoughts and progress more freely and deeply. This is why not having to worry about an immediate reaction can be deindividuating and disinhibiting. Moreover, some people may even experience asynchronous communication as "running away" after posting some personal, emotional, or hostile messages. It feels safe putting it "out there" where it can be left behind.

2.2.4 Solipsistic Introjection

Due to the absence of physical cues online, users may assign various traits to others' communications; for example, one might read someone else's forum post in a certain voice in his or her head. This commingling of mental projections and online identities causes users, to ascribe imagined characteristics to others' virtual personas, effectively blending the digital realm with an individual's inner world consciously or unconsciously. This process is called solipsistic introjection. Joinson (2007) also gives solipsistic introjection a definition that it is due to the lack of visual or verbal cues—Internet users read e-mail messages in their own voice in their head, leading to processes of merging and possibly transference.

It is interesting to note that it can also aid in therapy process in online support groups. Psychologists postulate that solipsistic introjection can help individuals bond or identify with others in a given community, creating an effective path towards interpersonal understanding, especially if the group understands and knows how to work with these transference distortions, which are common in text communication (Barak et al., 2008). However, solipsistic introjection encourages toxic disinhibition by allowing for the misinterpretation of actions or communication of others' online identities. Suler (2004) claimed that even when online relationships are not involved, many people carry on these kinds of conversations in their imagination throughout the day. Online text communication can evolve into an introjected psychological tapestry in which a person's mind weaves these fantasy role plays, usually unconsciously and with considerable disinhibition.

2.2.5 Dissociative Imagination

If we combine solipsistic introjection with the capability of cyberspace, we get a slightly different force that magnifies disinhibition. People may feel that the imaginary characters they "created" exist in a different space, that one's online persona along with the online others live in a make-believe dimension, a dream world, separate and apart from the demands and responsibilities of the real world. They split or "dissociate" online fiction from offline fact. Emily Finch, an author and criminal lawyer studying identity theft in cyberspace, has suggested that some people see their online life as a kind of game with rules and norms that don't apply to everyday living. Once they turn off the computer and return to their daily routine, they believe they can leave that game and their game-identity behind (Suler, 2004).

Although anonymity tends to amplify dissociative imagination, dissociative imagination and dissociative anonymity usually differ in the complexity of the dissociated part of oneself. Under the influence of anonymity, the person may try to be invisible, to become a non-person, resulting in a reducing or simplifying of identity. During dissociative imagination, the self that is expressed, but split-off, tends to be more elaborate (Suler, 2004).

2.2.6 Minimization of status and authority

Authority figures express their status and power in their dress, body language, and in the trappings of their environmental settings. The absence of those cues in the text environments of cyberspace reduces the impact of their authority. This condition is similar to reduced social cues; it assumes that CMC leads to less self-awareness and in turn to more anti-normative, extreme, and in some cases even rude behaviors (Kiesler et al., 1985). Suler (2004) mentioned that in most cases, everyone in the cyberspace has an equal chance to express him or herself. Everyone, regardless of status, wealth, race, gender, etc., starts off on a level playing field. People are unwilling to show what they really think as they stand in front of an authority figure. A fear of disapproval and punishment from on high dampens the spirit. But online, in what feels like a peer relationship, with the appearances of "authority" minimized, people are much more willing to speak out or misbehave.

Although in some situations, disinhibition effect can make people do or say positive things, it can also lead to rude language, harsh criticisms, anger, hatred, and even threats. Some group members might act out in ways that disrupt the group's cohesion. Based on the literature review above, we proposed the following hypotheses:

H1 : Internet psychological characteristics positively influence online toxic disinhibition.

2.3 SIDE Model

By challenging traditional deindividuation theory and with it the assumptions that such factors as lowered identifiability and immersion in the group lead to a loss of identity and hence to uncontrolled behavior. The social identity model of deindividuation effects (SIDE) has been developed as an extension of social identity theory and social change theory, in order to account for the complex effects of anonymity within groups (Reicher et al., 1995). The SIDE theory suggests that in the absence of individuating cues about others, as is the case in

computer-mediated communication, individuals build stereotypical impressions of others based on limited information (Lea et al., 1992).

Deindividuation manipulations take effect, firstly, by affecting the salience of social identity (and hence conformity to categorical norms) and, secondly, through their effects upon strategic considerations relating to the expression of social identities. Reicher et al. (1995) conclude that the classic deindividuation paradigm of anonymity within a social group, far from leading to uncontrolled behavior, maximizes the opportunity of group members to give full voice to their collective identities. In the internet community, anonymity produces a tendency toward deindividuation. Individuals will not pay attention to the other members of the difference between each other instead of improving the notice of similarity between other members. Thus, it formats higher group identity, and takes collective group norms similar behavior (Sassenberg & Postmes, 2002). Although CMC gives us the opportunity to traverse social boundaries, paradoxically, it can also afford these boundaries greater power, especially when they define self- and group identity. Past researches of community interaction and socialization process were based on community identity and group norms mostly (Dholakia & Bagozzi, 2004).

Social identity of the online community has two common concepts; one is that people identify with the community themselves, a sense of belonging to that community, and the other is the identity of self-concept (Mael & Ashforth, 1992). Through measuring the concept of community identity, we can understand the strength of the relationship between the members of the community and can infer whether a person will become a member or not. That is, a person is part of the virtual community. The main point of social identity theory is that the personal identity of the groups, this sense of identity from the individuals of the community. Group identity is an important factor that is commonly used in the process of "social impact". It can increase the brand emotional connection, help other members actively, or improve community engagement.

Group norm is the pattern of behaviors in a particular group, including the group's goals, values, and culture, accepted as normal and to which an individual is expected to conform (Dholakia & Bagozzi, 2004). Recent research has shown that group norms have a strong influence in computer-mediated groups. Group norms

emerge in such groups through interaction, and are often inferred by members from text-based communications (Bagozzi & Dholakia, 2002). What's more, Postmes and his colleagues show that the anonymity afforded by computer-mediated groups allows deindividuation effects to occur—enhancing susceptibility of group members to situational group norms (Postmes & Spears, 1998; Postmes et al., 2000).

In addition, according to the “Social Identity of Deindividuation Effects” (SIDE) theory, if group membership is perceived salience, the group would have greater influence on its members' behaviors (Reicher et al., 1995). Thus, if the norm of a group favors anti-social behaviors, the members in this group will have very strong tendency to follow the group norms. Following this theory the moderators of any online community should try their best to create polite and good group norms and also try to enhance the salience of the group norms to regulate their members' behaviors (Lee, 2007). This research adopted group norms to investigate if this element would moderate toxic disinhibition through community interaction and operation.

H2 : The magnitude of Internet psychological characteristics impact on online disinhibition is associated with the level of group norm

2.4 Containment theory

Containment theory is based upon the assumption that the propensity to commit acts that deviate from social norm is inherent in everyone (Thompson & Dodder, 1983). It shows that society produces a series of pulls and pushes toward the phenomenon of delinquency. Reckless (1961) proposes that containment theory is an explanation of conforming behaviors as well as deviancy. It has two reinforcing aspects: an inner control system and an outer control system. Are there elements within the self and within the person's immediate world that enable him to hold the line against deviancy or to hue to the line of social expectations? The assumption is that strong inner and reinforcing outer containment constitutes insulation against normative deviancy (not constitutional or psychological deviancy), that is, violations of the sociologic conduct norms.

Containment theory assumes that for every individual containing external structure as well as protective internal structure exist concurrently. Both buffer, protect, and insulate an individual against delinquency. Reckless formulates his theory to explain not only delinquency, but also conformity.

2.4.1 Inner containment

Inner containment is the ability for a person to follow expected norms through self-control. Inner containment, simply put, is the "self" component. It is the inner strength of one's personality. It includes a good self-concept, strong ego, well developed conscience, high sense of responsibility, and high frustration tolerance (Reckless, 1973). It has sometimes been suggested that, at least in certain contexts, we need to consider not only perceived social pressures but also personal feelings of moral obligation or responsibility to perform, or refuse to perform, a certain behavior (Schwartz & Tessler, 1972; Pomazal & Jaccard, 1976; Gorsuch & Ortberg, 1983). Such moral obligations can potentially influence intentions, in parallel with attitudes, subjective norms and perceptions of behavioral control. Porter & Kramer (2006) assert that moral obligation is a duty to be good citizens and to "do the right thing". Moral obligation is an individual's internal state that the responsibility of individuals should adopt ethical or unethical behaviors when they face ethical issues. Moral obligation also reflects the personal value system consistent with individuals' own internal pressures (Lam, 1999).

The temporal immediacy of the moral issue is the length of time between the present and the onset of consequences of the moral act in question (shorter length of time implies greater immediacy). The proximity of the moral issue is the feeling of nearness (social, cultural, psychological, or physical) that the moral agent has for victims (beneficiaries) of the evil (beneficial) acts in question. The concentration of effect of the moral act is an inverse function of the number of people affected by an act of given magnitude. According to Jones (1991), moral intensity is a construct that captures the extent of issue-related moral imperative in a situation. It is multidimensional, and its component parts are characteristics of the moral issue such as magnitude of consequences, social consensus, and probability

of effect, temporal immediacy, proximity, and concentration of effect.

Moral issues may take on added salience with respect to behaviors of this kind, and a measure of perceived moral obligation and intensity can add predictive power to the model; it increases the ability of prediction of intention to behavior on moral issues (Beck & Ajzen, 1991). Lam (1999) also thinks that moral obligation is from internal pressures of personal value system. It is different from subjective norm, so moral obligation should be adopted as a contributing factor of intention to behavior. In this research paper, we considered moral obligation and moral intensity as inner containment.

2.4.2 Outer containment

Outer containment is the ability of society to confine individual behavior within acceptable ranges of norms and expectations, and consists of three aspects: internalization of rules, availability of meaningful roles, and group reinforcement (Reckless, 1973).

Deterrence theorists believe that if punishment is severe, certain and swift, a rational person will measure the gains and losses before engaging in a crime and will be deterred from violating the law if the loss is greater than the gain (Zimring & Hawkin, 1973). Moreover, deterrence hypotheses can be tested by examining the relationship between people's current perceptions of the threat of sanctions and their current estimates of the probability of offending. Moreover, Klepper & Nagin (1989) presented respondents with scenarios involving tax noncompliance and systematically varied conditions likely to affect perceptions of the certainty and severity of punishment and the rewards of noncompliance. Thus, respondents contemplated the risks and rewards of offending within a specific context.

Certainty of punishment simply means to make sure that punishment takes place whenever a criminal act is committed. If individuals know that their undesirable acts will be punished, they will refrain from offending in the future (Silberman, 1976). Moreover, punishment must be swift in order to deter crime. The closer the application of punishment is to the commission of an offense, the greater the likelihood that offenders will realize that crime does not pay.

Severity of punishment concerns the idea that the more severe the punishment, the more likely a rationally calculating human being will desist from criminal acts. To prevent crime, therefore, criminal laws must emphasize penalties. Punishment that is too severe is unjust, and punishment that is not severe enough will not deter criminals from committing crimes.

According to the containment theory (Reckless, 1961), the determining factor that explains both conformity and deviance is the extent to which an individual is prohibited from committing delinquent acts. This prohibition, or control, comes from two sources: the self (inner containment) and the immediate social world within which the individual lives (outer containment) (Thompson & Dodder, 1983).

Based on the above literature review, we proposed the following hypotheses:

H3a: The magnitude of Internet psychological characteristics' impact on online disinhibition is associated with the level of inner containment

H3b: The magnitude of Internet psychological characteristics' impact on online disinhibition is associated with the level of outer containment

3. Research model and Methodology

3.1 Research model

In accordance with the literature, we based our model on internet psychological characteristics that influence online disinhibition behaviors. Also, we considered the SIDE theory and the containment theory as moderators of the relation between internet psychological characteristics and online toxic disinhibition behaviors. The operational definition is described in Table1 and the research model is shown in Figure 1.

Applying User’s Psychological Characteristics, SIDE and Containmentment to Explore the Antecedents of Online Disinhibition

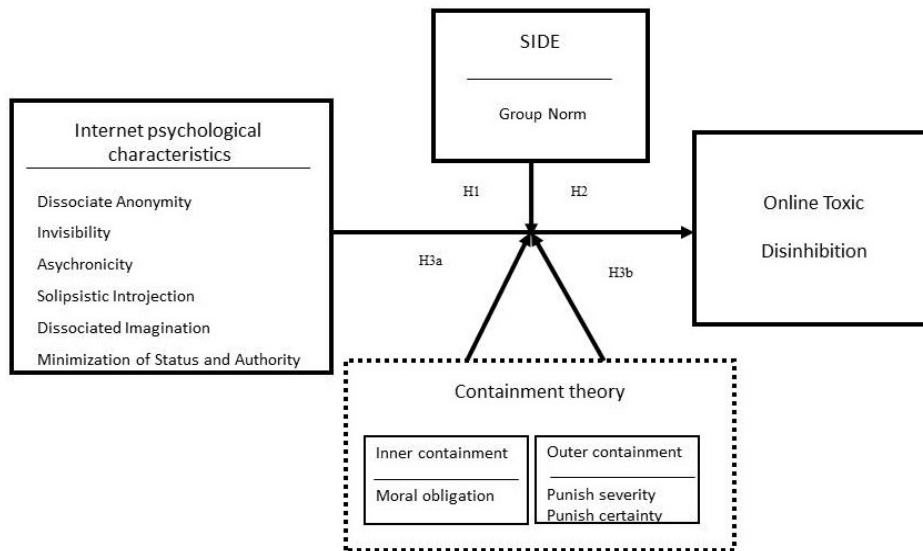


Figure 1 Research Model

Data source: this research

3.2 Sampling and Data Collection

The target population of our study was university students. We distributed paper-based questionnaires among college students to collect data. On the cover of the questionnaire, we explained the goal of this research and gave some statements to ensure their privacy in filling up the questionnaire. The duration of questionnaire collection was around two weeks, from September 30 to October 11, 2014, and we received 500 questionnaires back. After removing invalid samples, we collected 488 valid responses in total.

3.3 Demographic Analysis

The demographic information of these 488 valid samples is shown in Table 1. The data show the number of male and female, grades and departments in university, as well as the duration of time spent online respectively. 41.1% of respondents were male and 58.9% were female. In addition, about sixty percent of

the respondents spent approximately over 4 hours online (not working or doing homework) a day. Facebook was the most frequently visited community, 91.8% of the respondents logged on it.

Table1 Sample Demographics (N =488)

Measure	Categories	Frequency	Percentage
Gender	Female	288	58.9
	Male	200	41.1
Department	Leisure Management	98	20.0
	Finance	95	19.5
	Computer Science and Information	138	28.4
	Engineering	157	32.1
	Information Management		
Grade	first year	117	23.9
	Second year	240	49.3
	Third year	64	13.1
	Fourth year	67	13.7
Average spending time online a day	one hours and under	20	4.1
	1-3 hours	174	35.6
	4-6 hours	191	39.1
	7-9 hours	59	12.1
	10-12 hours	17	3.5
The most commonly used functions online (multiple choice)	12 hours or more	27	5.5
	PTT	68	13.9
	Bahamut	126	25.8
	Moblie01	31	6.4
	Eyny	110	22.5
	Facebook	448	91.8
Play Games	Post Pictures	111	22.7
	Watching movies	271	55.5
	Play Games	268	54.9

Data source: this research

3.4 Constructs and Measurements

The literature review allowed us to identify construct definitions and any existing measures. In order to develop the scales for each construct in our model, we adopted and adapted previously developed valid measures from published

studies to fit our research context. The operational definitions are shown in Table 2. After the draft was designed, a pretest was performed. Based on the respondents' feedback, the questionnaire was adjusted to improve readability and to ensure its accuracy and appropriateness.

Table 2 Operational Definitions

Construct	Operational definition	Reference
Dissociate Anonymity	The degrees, to which people can hide, alter or make others unable to identify some or all of their identities.	Suler, 2004; Lapidot-Lefler & Barak, 2012
Invisibility	The degree to which people worry about others seeing their appearance, sounds and facial expressions when they type a message or make a response.	Suler, 2004; Barak et al., 2008
Asynchronicity	The degree to which people think that there are delayed response in online communication.	Suler, 2004
Solipsistic Introjection	The degree to which people ascribe imagined characteristics to others' virtual personas, effectively blending the digital realm with an individual's mind consciously or unconsciously.	Suler, 2004
Dissociative Imagination	The degree to which that the imaginary characters that people "created" exist in a different space; the online persona makes people separate and apart from the demands and responsibilities of the real world.	Suler, 2004
Minimization of Status and Authority	The degrees to which the absence of cues in the text environments of cyberspace reduces the impact of authorities and let people feel like a peer relationship online.	Kiesler et al., 1985; Suler, 2004
Toxic Disinhibition	The degree to which people have antisocial behaviors, such as rude language, harsh criticisms, anger, aggressive statements, or offensive comments.	Suler, 2004

Group Norm	Subject Norm: The degree to which a person's perception that most people who are important to him think he should or should not perform the behavior in question.	Fishbein & Ajzen, 1975; Anderson & Agarwal, 2010
	Descriptive Norm: The degree to which one believes others are performing the behavior, tapping into the propensity an individual may have to indirectly reciprocate the believed behavior of others.	Van Dijk & Wilke, 1997; Keser & Winden, 2000; Berkowitz, 2004
Inner Containment	The ability of a person to follow expected norms through self-control, including internal pressures of personal value system.	Reckless, 1973; Lam, 1999
Outer Containment	The ability of society to confine individual behavior within acceptable ranges of norms and expectations. The certainty of being punished and the severity of being punished	Reckless, 1973; Peace et al., 2003

Data source: this research

3.4.1 Reliability and Validity

The assessment of the measurement model should be evaluated on the criteria of reliability, convergent validity and discriminate validity (Chin et al., 1997). Reliability refers to the internal consistency of each construct. To test reliability, composite reliability, Cronbach's alpha and factor loading were employed in this study. It is suggested that composite reliability (CR) and Cronbach's alpha should both be higher than 0.7, with most of them approaching or exceeding the 0.7 level (Hair et al., 2010). As shown in Table 3, the CR and Cronbach's alpha of both construct exceed 0.7, indicating the adequate internal consistency of measurements in our study.

Convergent validity refers to that the extent to which items within the given construct should be related. Convergent validity should be validated when multiple indicators are used to measure one construct (Campbell & Fiske 1959). It can be examined by item-total correlation (ITC), factor loading and variance extracted by

constructs (AVE) (Fornell & Larcker, 1981). To conform adequate convergent validity, ITC should not be less than 0.3, factor loading should be greater than 0.7, and AVE should be greater than 0.5. Also, Nunnally (1978) states that if the factor loading is above 0.5, it can still be regarded as acceptable convergent validity. Hence, our results showed proper convergent validity of the measurement items.

Discriminate validity refers to the degree to which two constructs are distinct. To achieve required discriminate validity, the square root of AVE of each construct should be higher than the inter-construct correlation coefficient (Fornell & Larcker, 1981). Table 3 indicates that all the diagonal values exceeded the inter-construct correlations, indicating the measurements in our study reached adequate discriminate validity.

Table 3 AVE, CR, Cronbach's α

Variable	Cronbach's α	CR	Correlation coefficient and AVE ^{1/2}				
			Disinhibition	The level of Punishment	Group Norm	Internet psychological characteristics	Moral obligation
Disinhibition	0.915	0.936	0.864				
The level of Punishment	0.944	0.953	-0.155	0.831			
Group Norm	0.697	0.800	0.427	-0.120	0.704		
Internet psychological characteristics	0.839	0.848	0.270	0.078	0.315	0.456	
Moral obligation	0.859	0.860	-0.385	0.575	-0.388	-0.093	0.681

Note : CR (Composite Reliability) AVE (Average Variance Extracted)

Data source: this research

4. Data Analysis and Discussion

4.1 Data Analysis

Hypothesis testing was conducted through partial least squares regression analysis using Smart PLS software and SPSS19. In order to examine if each hypothesis was supported, we assessed the t-statistic for the standardized path coefficients. All the path coefficients for the model are shown in Figure 2.

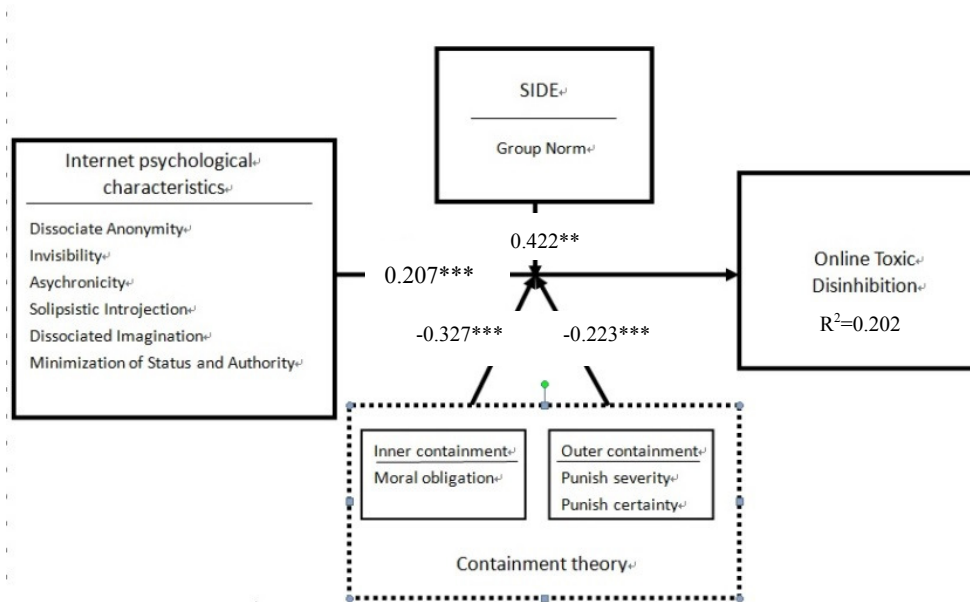


Figure2 Structure Model and Path Coefficient

Data source: this research

Firstly, as indicated by path loadings, internet psychological characteristics ($\beta=0.207$, $p<0.001$) had significantly positive effects on toxic disinhibition (Figure 3). This result confirmed our theoretical expectation and provided support for our hypothesis 1. The moderated effects between group norms to toxic disinhibition

was significant and positive ($\beta=0.422$, $p<0.001$), shown as Figure 4. Thus hypothesis 2 was supported. For containment theory, inner containment showed significant and negatively moderated effect to toxic disinhibition ($\beta=-0.327$, $p<0.001$), it supported hypothesis 3a (Figure 5). Meanwhile, the path between outer containment ($\beta=-0.223$, $p<0.001$) was also significant in our structure model. To sum up, hypothesis 3b was supported (Figure 6).

Table 4 Results of Structural Model

Hypothesis	Standardized path coefficient	T-statistic	Result
H1 : Internet psychological characteristics positively influence online toxic disinhibition.	0.207	4.673***	support
H2 : The magnitude of Internet psychological characteristics impact on online disinhibition is associated with the level of Group Norm	0.422	7.804***	support
H3a: The magnitude of Internet psychological characteristics impacts on online disinhibition is associated with the level of inner Containment	-0.327	-5.579***	support
H3b: The magnitude of Internet psychological characteristics impacts on online disinhibition is associated with the level of outer containment	-0.223	-3.591***	support

$P^*<0.05$ $P^{**}<0.01$ $P^{***}<0.001$

Data source: this research

Table 5 Results of data analysis

	Model 0 Direct Effect of psychological characteristics		Model 1 Moderated by group norm		Model 2 Moderated by moral obligation		Model 3 Moderated by punishment	
	B	T value	β	T value	β	T value	β	T value
H₁	0.207	4.673***	-0.059	-1.098	0.429	7.323***	0.365	5.882***
H₂			0.422	7.804***				
H_{3a}					-0.327	-5.579***		
H_{3b}							-0.223	-3.591***
F	21.839***		42.719***		27.161***		17.634***	
R²	0.043***		0.150***		0.101***		0.068 ***	

Dependent Variable: toxic disinhibition
*P**<0.05 *P***<0.01 *P****<0.001

Data source: this research

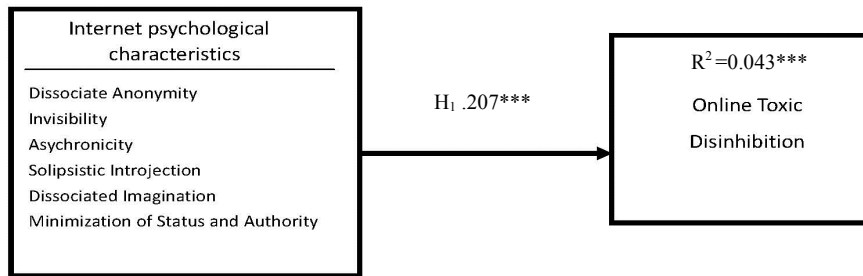


Figure 3 Results of the Moderated Model 0

Data source: this research

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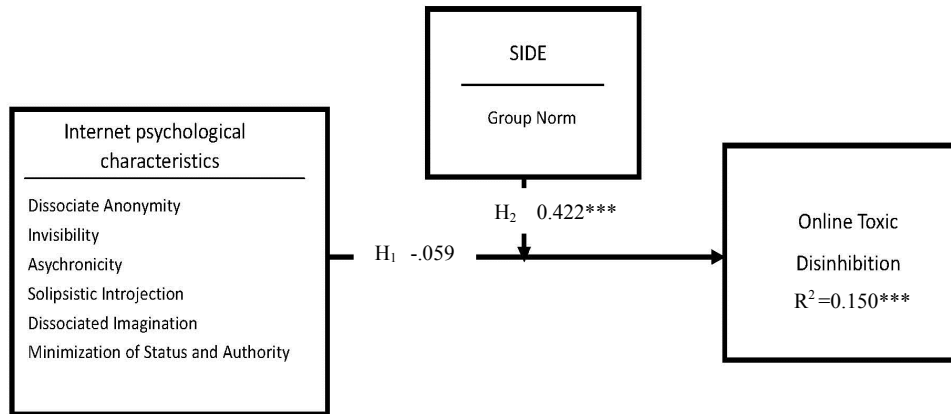


Figure 4 Results of the Moderated Model 1

Data source: this research

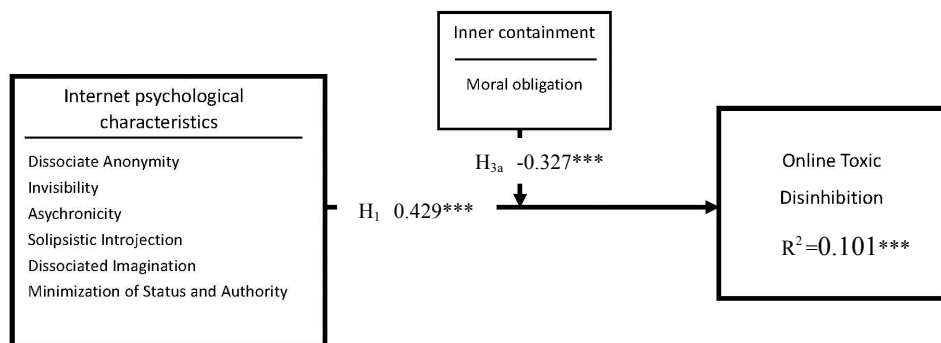


Figure 5 Results of the Moderated Model 2

Data source: this research

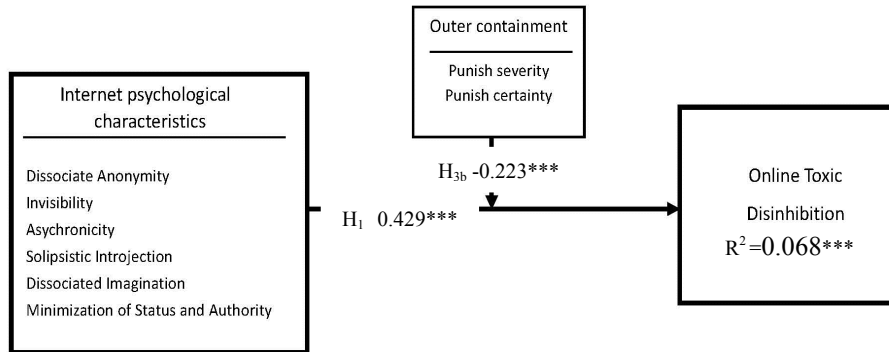


Figure 6 Results of the Moderated Model 3

Data source: this research

4.2 Discussion

This study introduced a more comprehensive model to understand what factors lead to toxic disinhibition. Lapidot-Lefler & Barak (2012) point out that the negative online disinhibition effect is the concept used to refer to the negative results of this loss of inhibitions, usually manifested in aggressive behaviors that apparently would not be exhibited in a similar scenario in the “real world.” We tested three dimensions: psychological dimension, social dimension, and environmental dimension, which promote or inhibit the anti-normative behaviors online.

We first discuss the effects of six internet characteristics on toxic disinhibition: dissociative anonymity, invisibility, asynchronicity, solipsistic introjection, dissociative imagination, and minimization of authority. Our results showed that internet psychological characteristics had a significant positive effect on online toxic disinhibition, which was consistent with previous studies that anonymity induces deindividuation and increases uninhibited behaviors (Bargh et al., 2002; Lapidot-Lefler & Barak, 2012; Suler, 2004). People can hide, alter or make others unidentify some or all of their identity and make them behave aggressively much

more easily. Solipsistic introjection can help individuals create an effective path towards interpersonal understanding and encourage deindividuation and disinhibition unconsciously (Suler, 2004; Barak et al., 2008). Dissociative imagination allow people to take on online personas that is separate and apart from the demands and responsibilities of the real world (Suler, 2004). The delayed reaction on the Internet has powerful influence on toxic disinhibition because people think of asynchronous communication as "running away" after posting some personal, emotional, or hostile messages (Suler, 2004). CMC adheres to normative influence rather than lends itself to antinormative behaviors. Some studies imply that reduced social cues, such as race, wealth, and status that categorize people and organize information about them, provide a safe and fairly non-threatening form of social interaction and allow more self-disclosure, but do not cause more out of regulation or antisocial behaviors (Lea et al., 1992; Joinson, 1998; Schouten et al., 2007).

Next, we discuss the social dimension. Group norms had a significant positive effect on toxic inhibition and also positively moderated the relation between internet psychological characteristics. It has been proven that the important ones of individuals do have impact on their intentions and behaviors (Fishbein & Ajzen, 1975; Anderson & Agarwal, 2010). People believe that the uninhibited behaviors of others do not make people who don't have aggressive behavior, change their intention. We speculated that the identification of the community one belongs to will weaken the disinhibited behaviors.

Thirdly, we discuss the environmental dimension. Inner containment had a strong negative effect on toxic disinhibition; it proved that through self-control and internal pressure, people can control their behaviors online. Moreover, the relationship between the path of outer containment and toxic disinhibition was also significant. Outer containment brings valid action to reduce uninhibited behaviors online.

5. Conclusions and Implications

5.1 Conclusions

Drawing upon the integrated perspectives of the internet psychological characteristics, social, and environmental dimensions, we developed a conceptual model to examine influential factors in antisocial behaviors online. We found that the psychological characteristics on the Internet have positive influences on toxic disinhibition. Group norms also significantly moderated the relationship between psychological characteristics and toxic disinhibition. We showed that moral issues including moral obligations, moral intensity and punishment negatively moderated the relation between psychological characteristics and toxic disinhibition. Below, we will provide some suggestions for practitioners and elaborate on how the combined model can be used for further research.

5.2 Academic Applications

Because of rapid upgrades in Internet transmission speed and the popularity of smart phones, information is transferred speedily and plentifully by users. However, it also brings a lot of negative effects, such as internet rumors, abuse and other misconducts. In academia, our research model can help researchers understand what factors cause toxic disinhibition. When researchers conduct similar studies in the future, they can refer the results of this research to further understand how to deal with the problem of toxic disinhibition online. By reviewing the literature, we found that previous studies have addressed the impact factors only separately, and that most of the prior studies have concentrated on either the internet dimension perspective or the psychological factor perspective of toxic disinhibition.

Moreover, toxic disinhibition is similar to criminal behaviors. In past studies, there are few researches that examine toxic disinhibition using criminal theories. For example, in deterrence theory both inner and outer deterrence have significant effects on toxic disinhibition. Future studies can focus on punishment certainty and severity when investigating toxic disinhibition.

5.3 Practical Implications

On the practical side, this study can help education policy makers formulate educational principles; them not only consider the internet characteristics but also consider the social and environmental dimensions. As a result, their policies will effectively help people avoid making inappropriate remarks and exhibiting inappropriate behavior online

Internet users hide their real identities when they behave inappropriately on internet, but once they acknowledge that the disinhibition behavior will be punished certainly or severely, and/or not recognized by the group they are belonging, the disinhibition behavior will be weakened. Additionally, we also find that the opinion of people who are important to individuals leads to toxic disinhibition so it is important that family, social and schools to participate online ethical education program to increase the inner containment of individuals which we proved it can validly reduce uninhibited behavior. Furthermore, they can influence each other not to do uninhibited behavior.

Thus, this study proposes that to prevent the toxic disinhibition behaviors occur on internet environment, especially for the university students, it is important to advocate relative laws, norms and ethics of internet behavior in campus. However, we found that outer containment significantly influences toxic disinhibition, managers of website and BBS might explore their policies of outer containment such as the penalty clauses for the violation behavior or violation reporting system in the future.

5.4 Limitations and Suggestions for Future Study

In response to the rapidly changing environment of modern society, there are more potential factors that can lead to toxic disinhibition. In future studies, it is necessary to discover them to help people avoid antisocial behaviors. While this study only focused on a specific online behavior, there are a lot of other important antisocial online behaviors such as unethical, hacking, crimes and online self-disclosure that we did not include. In the future, researchers can explore those variables and contribute a more complete framework.

Reference

- Anderson, C. L. and Agarwal, R., 2010, "Safe Computing: A Multimethod Empirical Examination of Home Computer User Security Behavioral Intentions," **MIS Quarterly**, Vol. 34, No. 3, 613-643.
- Bagozzi, R. P. and Dholakia, U. M., 2002, "Intentional social action in virtual communities," **Journal of Interactive Marketing**, Vol. 16, No. 2, 2-21.
- Barak, A., Boniel-Nissim, M., and Suler, J., 2008, "Fostering empowerment in online support groups," **Computers in Human Behavior**, Vol. 24, No. 5, 1867-1883.
- Bargh, J. A., McKenna, K. Y. A., and Fitzsimons, G. M., 2002, "Can You See the Real Me? Activation and Expression of the "True Self" on the Internet," **Journal of Social Issues**, Vol. 58, No. 1, 33-48.
- Beck, L. and Ajzen, I., 1991, "Predicting Dishonest Actions Using the Theory of Planned Behavior," **Journal of Research in Personality**, Vol. 25, No. 3, 285-301.
- Berkowitz, A. D., 2004, "An overview of the social norms approach" in Lederman, L. and Stewart, L. (eds.), **Changing the culture of college drinking**, First Edition, Cresskill, NJ: Hampton Press, 193-214.
- Campbell, D. T. and Fiske, D. W., 1959, "Convergent and discriminant validation by the multitrait-multimethod matrix," **Psychological Bulletin**, Vol. 56, No. 2, 81-105.
- Chin, W. W., Gopal, A., and Salisbury, W. D., 1997, "Advancing the theory of adaptive structuration: The development of a scale to measure faithfulness of appropriation," **Information Systems Research**, Vol. 8, No. 4, 342-367.
- Dholakia, U. M. and Bagozzi, R. P., 2004, "Motivational antecedents, constituents and consequents of virtual community identity" in Godar, S. and Pixie-Ferris, S. (eds.), **Virtual and collaborative teams: Process, technologies, and practice**, First Edition, Hershey, PA: IDEA, 252-267.
- Diener, E., 1980, "Deindividuation: The absence of self-awareness and self-regulation in group members" in Paulus, P. B. (ed.), **Psychology of group influence**, First Edition, Hillsdale, NJ: Lawrence Erlbaum Associates, 209-242.
- Festinger, L., Pepitone, A., and Newcomb, T., 1952, "Some consequences of deindividuation in a group," **Journal of Abnormal and Social Psychology**, Vol. 47, No. 2, 382-389.
- Fishbein, M. and Ajzen, I., 1975, **Belief Attitude, Intention and Behavior: An Introduction to Theory and Research**, 1st, Reading, MA: Addison-Wesley.
- Fornell, C. and Larcker, D. F., 1981, "Evaluating structural equation models with unobservable variables and measurement error," **Journal of Marketing Research**, Vol. 18, No. 1, 39-50.
- Gorsuch, R. L. and Ortberg, J., 1983, "Moral Obligation and Attitudes: Their Relation to

Applying User's Psychological Characteristics, SIDE and Containment
to Explore the Antecedents of Online Disinhibition

- Behavioral Intentions," **Journal of Personality and Social Psychology**, Vol. 44, No. 5, 1025-1028.
- Grayson, P. A. and Schwartz, V., 2000, "Commentary on "Contrasting case studies of frequent Internet use:" Is It Pathological or Adaptive?" **Journal of College Student Psychotherapy**, Vol. 14, No. 4, 19-22.
- Hair, J. F., Black, W. C., Babin, B. J., and Anderson, R. E., 2010, **Multivariate data analysis**, 7th, Upper Saddle River, NJ: Prentice Hall.
- Joinson, A., 1998, "Causes and implications of disinhibited behavior on the Net" in Gackenbach, J. (ed.), **Psychology of the Internet**, First Edition, New York: Academic Press, 43-60.
- Joinson, A. N., 2007, "Disinhibition and the Internet" in Gackenbach, J. (ed.), **Psychology and the Internet: Intrapersonal, interpersonal, and transpersonal implications**, Second Edition, San Diego, CA: Academic Press, 75-92.
- Jones, T. M., 1991, "Ethical decision making by individuals in organisations: an issue contingent model," **Academy of Management Review**, Vol. 16, No. 2, 366-395.
- Keser, C. and Winden, Frans van, 2000, "Conditional Cooperation and Voluntary Contributions to Public Goods," **Scandinavian Journal of Economics**, Vol. 102, No. 1, 23-39.
- Kiesler, S., Siegal, J., and McGire, T. W., 1984, "Social psychological aspects of computer mediated communication," **American Psychologist**, Vol. 39, No. 1, 1123-1134.
- Kiesler, S., Zubrow, D., Moses, A. M., and Geller, V., 1985, "Affect in computer-mediated communication: An experiment in synchronous terminal-to-terminal discussion," **Human-Computer Interaction**, Vol. 1, No. 1, 77-104.
- Klepper, S. and Nagin, D., 1989, "The Deterrent Effect Of Perceived Certainty And Severity Of Punishment Revisited," **Criminology**, Vol. 27, No. 4, 721-746.
- Lam, S. P., 1999, "Predicting Intentions to Conserve Water From the Theory of Planned Behavior, Perceived Moral Obligation, and Perceived Water Right," **Journal of Applied Social Psychology**, Vol. 29, No. 5, 1058-1071.
- Lapidot-Lefler, N. and Barak, A., 2012, "Effects of anonymity, invisibility, and lack of eye-contact on toxic online disinhibition," **Computers in Human Behavior**, Vol. 28, No. 2, 434-443.
- Lea, M., O'Shea, T., Fung, P., and Spears, R., 1992, "Flaming in computer-mediated communication: observations, explanations, implications" in Lea, M. (ed.), **Contexts of Computer-mediated Communication**, First Edition, New York: Harvester Wheatsheaf, 89-112.
- Lee, E. J., 2007, "Deindividuation Effects on Group Polarization in Computer-Mediated Communication: The Role of Group Identification, Public-Self-Awareness, and Perceived Argument Quality," **Journal of Communication**, Vol. 57, No. 2, 385-403.
- Leung, L., 2003, "Impacts of net-generation attributes, seductive properties of the Internet,

- and gratifications-obtained on Internet use,” **Telematics and Informatics**, Vol. 20, No. 2, 107-129.
- Mael, F. and Ashforth, B. E., 1992, “Alumni and their alma mater: A partial test of thereformulated odel of organizational identification,” **Journal of Organizational Behavior**, Vol. 13, No. 2, 103-123.
- McKenna, K. Y. A. and Bargh, J. A., 2000, “Plan 9 from cyberspace: The implications of the Internet for personality and social psychology,” **Personality and Social Psychology Review**, Vol. 4, No. 1, 57-75.
- Nunnally, J. C., 1978, **Psychometric theory**, 1st, New York: McGraw-Hill.
- Peace, A., Galletta, D., and Thong, J., 2003, “Software piracy in the workplace: A model and empirical test,” **Journal of Management Information Systems**, Vol. 20, No. 1, 153-177.
- Pomazal, R. J. and Jaccard, J. J., 1976, “An informational approach to altruistic behavior,” **Journal of Personality and Social Psychology**, Vol. 33, No. 3, 317-326.
- Porter, M. E. and Kramer, M. R., 2006, “Strategy-Society:The Link Between Competitive Advantage and Corporate Social Responsibility,” **Harvard Business Review**, Vol. 84, No. 12, 78-92.
- Postmes, T. and Spears, R., 1998, “Deindividuation and Antinormative Behavior: A Meta-Analysis,” **Psychological Bulletin**, Vol. 123, No. 3, 238-259.
- Postmes, T., Spears, R., and Lea, M., 2000, “The formation of group norms in computer-mediated communication,” **Human Communication Research**, Vol. 26, No. 3, 341-371.
- Reckless, W. C., 1961, “A new theory of delinquency and crime,” **Federal Probation**, Vol. 25, No. 1, 42-46.
- Reckless, W. C., 1973, **The crime problem**, 5th, Englewood Cliffs, NJ: Prentice Hall.
- Reicher, S., Spears, R., and Postmes, T., 1995, “A social identity model of deindividuation phenomena,” **European Review of Social Psychology**, Vol. 6, No. 1, 161-198.
- Sassenberg, K. and Postmes, T., 2002, “Cognitive and strategic processes in small groups: effects of anonymity of the self and anonymity of the group on social influence,” **British Journal of Social Psychology**, Vol. 41, No. 3, 463-480.
- Schouten, A. P., 2007, **Adolescents’ online self-disclosure and self-presentation**, Ph. D. Thesis, Amsterdam School of Communication Research.
- Schouten, A. P., Valkenburg, P. M., and Peter, J., 2007, “Precursors and underlying processes of adolescents' online self-disclosure: Developing and testing an “Internet-attribute-perception” model,” **Media Psychology**, Vol. 10, No. 2, 292-315.
- Schwartz, S. H. and Tessler, R. C., 1972, “A test of a model for reducing measured attitude-behavior inconsistencies,” **Journal of Personality and Social Psychology**, Vol. 24, No. 2, 225-236.
- Short, J., Williams, E., and Christie, B., 1976, **The social psychology of**

Applying User's Psychological Characteristics, SIDE and Containment to Explore the Antecedents of Online Disinhibition

- telecommunications**, 1st, New York: John Wiley & Sons.
- Silberman, M., 1976, "Toward a Theory of Criminal Deterrence," **American Sociological Review**, Vol. 41, No. 3, 442-461.
- Sproull, L. and Kiesler, S., 1986, "Reducing social context cues: Electronic mail in organizational communications," **Management Science**, Vol. 62, No. 2, 1492-1512.
- Stritzke, W. G. K., Nguyen, A., and Durkin, K., 2004, "Shyness and computer-mediated communication: A self-presentational theory perspective," **Media Psychology**, Vol. 6, No. 1, 1-22.
- Suler, J. R., 2004, "The online disinhibition effect," **CyberPsychology and Behavior**, Vol. 7, No. 5, 321-326.
- Thompson, W. E. and Dodder, R. A., 1983, "Juvenile Delinquency Explained?: A Test of Containment Theory," **Youth & Society**, Vol. 15, No. 2, 171-194.
- Turkle, S., 1984, **The second self: Computers and the human spirit**, 20th, Cambridge, MA: MIT Press.
- Turkle, S., 1994, "Constructions and reconstructions of self in virtual reality: Playing in the MUDs. Mind," **Culture, and Activity**, Vol. 1, No. 3, 158-167.
- Van Dijk, E. and Wilke, H., 1997, "Is It Mine or Is It Ours? Framing Property Rights and Decision Making in Social Dilemmas," **Organizational Behavior and Human Decision Processes**, Vol. 71, No. 2, 195-209.
- Zimbardo, P. G., 1977, **Shyness: What is it and what to do about it?**, 1st, London: Pan Books.
- Zimbardo, P. G., Arnold, W., Levine, J. D., and Bond, R., 1969, "The human choice: Individuation, reason, and order vs. deindividuation, impulse and chaos" in Arnold, W. J. and Levine, D. (eds.), **Nebraska symposium on motivation**, First Edition, Lincoln, NE: University of Nebraska Press, 237-307.
- Zimring, F. E. and Hawkin, G. J., 1973, **Deterrence: the Legal Threat in Crime Control**, 1st, Chicago: The University of Chicago Press.

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