Application of Situational Action Theory in Japan Using Vignette Survey

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Abstract

This study applied Wikström's Situational Action Theory (SAT) of crime causation to Japanese people in their 30 s–40 s ($N = 320$). Participants in an internet survey were presented with three criminogenic scenarios—traffic crime, individualistic white-collar crime, and corporate white-collar crime—and were asked to rate the likelihood of them committing a crime in these scenarios. They were also asked to evaluate their morality, moral context, and degree of temptation in each scenario, as well as their tendency for self-control, interdependent view of self, and independent view of self. The results supported SAT in that the moral context positively and morality negatively predicted the likelihood of committing a crime. However, the results were inconsistent with SAT's assertion that other variables influenced those with low morality more than those with high morality. Further, the tendency to have an interdependent view of self affected the likelihood of committing a crime in some scenarios. This result indicates that in some situations, some people are more influenced by expectations of their behavior from their surroundings, in addition to their morality. Future empirical studies of SAT are needed to examine the influence of self-control on criminal phenomena using the ability to exercise self-control in certain situations that conform to the concept of self-control advocated by SAT. Morality is also a crucial concept in the SAT. Therefore, future research should examine how the morality of trying to fulfill social role expectations and previously assessed morality influence the likelihood of committing a crime.

Keywords Situational action theory · Morality · Self-control · Moral context · Interdependent view of self

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Introduction

Characteristics of Situational Action Theory

Situational Action Theory (SAT) was developed by Wikström (2004). A basic idea of the theory is to bring together environment-oriented and person-oriented explanations of crime. According to Wikström et al. (2018, p.12), most leading criminological theory tends to focus on either person-oriented or environment-oriented explanatory factors and does not illustrate how these factors interact to explain acts of crime. SAT bridges this divide by integrating key insights about the role of people and places in crime causation. Borrowing concepts from several theories and redefining some key concepts in criminology, SAT tries to clarify the process by which these factors interact to bring about action.

SAT tries to explain why people engage in acts of crime when they know it is illegal or deviant (Wikström, 2004; negligence is excluded). SAT defines and analyzes acts of crime as moral actions, that is, actions guided by value-based rules of conduct specifying what is the right or wrong thing to do (or not do) in response to particular motivations in the conduct of particular circumstances (Wikström et al., 2018). SAT recognizes the primacy of morality in the etiology of behaviors such as intentional violations of laws and norms prescribing right from wrong.

Wikström (2004) describes the perception–choice process as a two-step causal process by which acts of crime are seen as the result of a person's perception of an act of crime as an alternative in a given context and the choice to exercise that behavior. The first step in the causal process involves perception—perceiving crime as an action alternative in the situation. If people do not perceive crime as an action alternative, they will not engage in it. Conversely, if crime is perceived as an available alternative, the person proceeds to the second step, in which the familiarity of the situation has influence. Although people tend to respond with habitual behavior in familiar situations, they tend to choose the behavior by rational deliberation in less familiar situations.

SAT argues that the likelihood that a person will commit offenses depends on his or her propensity toward crime, his or her exposure to criminogenic situations, and, in particular, the interaction between propensity and exposure (Wikström, 2004). The construct of propensity is conceived as the general tendency of persons to perceive and choose crimes as action alternatives. One of these propensities is the person's morality, which comprises moral rules and emotions of shame and guilt. Another propensity is the person's ability to exercise self-control, that is, to act in accordance with personal moral rules.

The conceptualization of self-control in SAT is different from that introduced by Gottfredson and Hirschi (1990) in their *General Theory of Crime*, which holds that low self-control should be seen as the main cause of crime. SAT makes a distinction between the individual trait and the process of exercising self-control. Self-control as a process is defined as "the successful inhibition of perceived action alternatives … that conflict with an individual's morality" (Wikström & Treiber, 2007, p. 258). More recently, the ability to exercise self-control has been defined as people's ability to withstand external pressure to act against their own personal morals (Wikström & Treiber, 2015, p.431). Self-control is often reduced to the capability to resist current temptations and provocations (Wikström & Svensson, 2010). There is empirical evidence that self-control has a greater impact when personal morality is weak, for example, Wikström and Treiber (2007).

The construct of exposure refers to the overall time spent in situations that are conducive to crime. When people are exposed to a certain situation, they may perceive it as

tempting and provocative, and this perception may induce the motivation for committing a crime. The moral context of the situation, that is, whether or not other rule-breakers are present (i.e., the degree of compliance with moral rules), is hypothesized to be crimino-genic. In addition, deterrence (the level of enforcement of formal or informal supervision) is equally important. Empirical tests of SAT demonstrate that exposure has a greater effect when personal morality is weak.

Although SAT was developed in Western countries, Wikström (2011, p. 63) stated, "SAT proposes to explain all kinds of crime, in all places, at all times." That is, SAT is explicitly intended to explain crime with universal applicability. In this context, it is valu-able to evaluate SAT in non-Western countries. Liu (2018) has suggested that one method is to transport a theory developed in the West and test its applicability and generalizabil-ity, while another more elaborate method is to transform the theory under non-Western contexts.

As Niabett (2003) observes, Asian societies are collective or interdependent in nature, whereas Western societies are individualistic or independent in nature. This societal con-text can affect the construal of the self, which describes how people perceive themselves in relation to others. According to Kitayama and Uchida (2005), while the "self" is an intrin-sic feature of human psychology, the way that the self is constructed varies depending on how personal "agency," both independent and interdependent, is exercised. When an inde-pendent agency is exercised, "the self is defined primarily in terms of attributes that are internal to it such as his or her own goals, desires, needs, personality traits, and abilities." In contrast, in the exercise of interdependent agency, "goals, desires, and needs of others in a relationship are just as important as one's own" (Kitayama & Uchida, 2005, p. 139). The independent mode of self-construal is associated with "action as influence" and with self-centricity. In contrast, the interdependent self is characterized by "action as adjust-ment" and with other-centricity. The style of independent agency tends to be dominant and widespread in European-American cultures, whereas the style of the interdependent agency is "quite dominant in East Asian cultures" (Kitayama & Uchida, 2005, p. 157).

Chiu et al. (1997) describe two kinds of moral beliefs, "duty-based" and "rights-based." A duty-based morality considers duties, such as the duty to fulfill the expectations of one's role, as the fundamental justification for the moral rightness of human action. In contrast, a rights-based morality considers human rights as understood within the culture, such as the right to equal opportunity, as the fundamental justification for the moral rightness of human action. Chiu et al. (1997) suggest that moral attributions in East Asian societies are more likely to be guided by duty-based moral beliefs, while those in Western societies are more likely to be guided by rights-based moral beliefs.

Messner (2015) points out that SAT, as currently formulated, has a shortcoming in that it does not consider the role of the larger cultural and institutional context. Assuming that these differences between East Asia and the West exist, empirical tests of SAT should include these perspectives. Therefore, this study was designed to empirically test SAT, tak-ing the influence of the East Asian context into account.

Empirical Studies

The original evidence for SAT was primarily drawn from the Peterborough Adoles-cent and Young Adult Development Study (PADS and PADS +) conducted by Wik-ström's research team at the University of Cambridge. Later, scholars began to assess key propositions of SAT with their own data and adult participants. Pauwels et al.

([2018](#)) identified the core propositions of SAT by reviewing empirical studies within the period 2006 to 2015 in Western countries. The most stable interaction effect identified in most studies was the interaction between exposure and propensity. On the other hand, most, but not all, studies supported the postulated interaction between deterrence and propensity and the interplay between personal morality and the ability to exercise self-control.

While SAT has largely been applied to street crime, Craig ([2019](#)) extended its scope to individualistic white-collar crime, one of two types of white-collar crime. Individualistic white-collar crime benefits the individual, and corporate white-collar crime (also known as organizational white-collar crime) benefits the organization more directly relative to the individuals committing it (Friedrichs, [2002](#)). Craig's results showed that individualistic white-collar crime had a negative relationship with morality and a positive relationship with low self-control. In addition, morality moderated the effect of self-control to predict individualistic white-collar crime. That is, although low self-control was a positive predictor of individualistic white-collar crime among those with low morals, low self-control was not a salient predictor of those offenses among individuals with high morals.

Although SAT has been evaluated mainly in Western countries, the application of SAT in non-Western areas, such as Russia, Iran, Latin America, India, and Korea, has recently been explored (Antonaccio et al., [2017](#); Shadmanfaat et al., [2020](#); Serrano-Maîllo, [2018](#); Kokkalera et al., [2020](#); Song & Lee, [2020](#)). Song and Lee ([2020](#)) examined the applicability of SAT to online bullying perpetration among Koreans. They found a non-significant direct effect of morality and a non-significant interaction between the two propensities of morality and self-control, an unexpected result that could be attributed to a difference in cultural contexts rather than a difference between online and offline contexts. Although a Japanese translation of Wikström and Sampson ([2006](#)) has been published, to the best of the author's knowledge, no empirical study of SAT has been conducted in Japan. Thus, the applicability of SAT to East Asian cultures remains unclear.

Cross-cultural studies of views of deviance that are unrelated to SAT have suggested the value of examining interdependence versus interdependence in studies of crime. Wong-On-Wing and Lui ([2007](#), [2013](#)) found that Chinese participants (students living in Hong Kong) perceived financial fraud as less immoral than did US participants (American students) when the fraud was perpetrated under clear situational pressure, for example, when the protagonists were under immense financial pressure, were forced by their supervisor, or needed money to help their relatives. The study by Over and Uskul ([2016](#)) found that children from an interdependent farming community in Turkey punished an individual who ostracized someone else less harshly than children from an independent herding community. These studies suggest that considering interdependence and interdependence in the application of SAT can lead to a more realistic understanding of the crime phenomenon in East Asia.

In addition, some studies have addressed individual differences, rather than cultural or regional differences, with respect to interdependence and interdependence. For instance, Peng et al. ([2023](#)) found that moral disengagement fully mediates the positive effect of independent self-construal and partially mediates the negative effect of interdependent self-construal on attitudes toward the unethical behavior of others. These studies suggest that it is possible to identify the relationship with crime from the perspective of interdependence and interdependence as individual differences.

The Present Study

The present study evaluates the applicability of SAT to traffic crime and corporate white-collar crime[1] and to adults in Japan. This study tests the following propositions of SAT, using key theoretical variables derived from SAT in each scenario.

> Hypothesis 1: crime propensity, which encompasses morality and self-control, affects the likelihood of committing a crime.
> Hypothesis 2: criminogenic exposure, which encompasses moral context, affects the likelihood of committing a crime.
> Hypothesis 3: crime propensity and criminogenic exposure predict the likelihood of committing a crime.
> The third hypothesis is based on the basic tenet of SAT that environment-oriented and person-oriented explanations of crime should be brought together.
> Hypothesis 4: morality interacts with criminogenic exposure and self-control to increase the likelihood of committing a crime.
> A specific prediction of the fourth hypothesis is that those with low morality are more affected by criminogenic exposure and self-control than those with high morality.
> Hypothesis 5: the degree of the interdependent view of self affects the likelihood of committing a crime.

The existing empirical studies on SAT have examined rights-based morality and shown morality to be an important predictor of the likelihood of committing a crime. However, people may make behavioral choices based on the expectations of their surroundings as well as their own morality. This *duty-based* morality may be especially influential in those with an interdependent view of self. Thus, while the present study measures rights-based morality, in line with previous empirical SAT studies, it further hypothesizes that the interdependent view of self, which affects duty-based morality, also affects the likelihood of committing a crime.

Research Methodology

Vignette Survey

A vignette survey was used to evaluate SAT. This methodology is broadly used in criminology (Nagin & Paternoster, 1993; Piquero & Tibbetts, 1996). The vignette study of Wikström et al. (2012) validated the results of the SAT test using both self-reported and officially recorded crime data.

The vignette methodology has several strengths. First, since the situation is easily manipulated in the vignette, the method is convenient for empirical tests of SAT, which hold that the situation promotes crime. In addition, asking survey participants whether they

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[1] The definition of white-collar crime, as stated by the U.S. Federal Bureau of Investigation (FBI), is "those illegal acts which are characterized by deceit, concealment, or violation of trust and which are not dependent upon the application or threat of physical force or violence. Individuals and organizations commit these acts to obtain money, property, or services; to avoid the payment or loss of money or services; or to secure personal or business advantage" (U.S. Department of Justice, 1989).

think they would likely commit a crime in a given situation does not require them to reveal their criminal history, does not intrude on their privacy, and reduces their psychological burden.

Some scholars have argued against the use of a vignette design in order to measure offending behavior (Rossi and Anderston, 1982) because of the limited correlation between a respondent's reported behavioral intentions and their actual behavior. However, other research has found a strong level of agreement between actual behavior and reported intentions (Green, 1988). The ability of scenarios to simulate real-life circumstances has also been questioned (Craig, 2019). In order to address this point, the present scenarios were carefully designed to resemble scenes that participants would confront in their real-life circumstances.[2]

The survey presented three types of criminogenic scenarios: speeding, a false application in one's own interest (false application for self-interest), and a false application for the company in which the main character is employed (false application for company), corresponding to traffic crime, individualistic white-collar crime, and corporate white-collar crime, respectively. In each scenario, two conditions of temptation to engage in illegal conduct, strong vs. weak temptation, were prepared (see the Appendix for the scenarios). The presentation order of the scenarios was randomized.

The main characters in the scenarios were named A, B, and C to be gender-neutral. Participants were instructed to read each scenario and imagine that they were in the position of the main character, who was tempted to engage in illegal conduct.

Sample

The vignette survey was written in Japanese and was administered to subscribers to an online web survey company in Japan. The subscribers were able to browse the questionnaire posted on a web page of the web survey company, and those who found the study interesting enough to participate completed the questionnaire via their device (i.e., mobile phone, personal computer, etc.). After completing the questionnaire, they received web credits that could be converted into cash or gift certificates. The eligible participants were people in Japan aged 30 to 40 years. The reason for the age limit was to engage participants who were more likely to encounter the prepared scenarios themselves. Participation was voluntary, and both the anonymity of the participants and the confidentiality of their responses were strictly guaranteed. Each participant was randomly assigned to one of the two temptation conditions for illegal conduct. The survey included two trap questions, which instructed participants to mark checkboxes in designated areas. Data from those who did not answer the trap questions correctly were excluded. The responses of 320 participants (160 male, 160 female, mean age 40.05, SD 2.75) were analyzed.

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[2] If the scenarios presented in the Appendix give the impression of being unrealistic, it may be because of the limitations of translation into English. When fifteen Japanese university students were asked to judge whether the scenarios could happen in real life, all responded that all of the scenarios could happen in real life.

Variables

Dependent Variable

For each scenario, participants responded to an item asking the likelihood that they would engage in illegal conduct if they were in the position of the main character of the scenario.[3] Responses were made on a 4-point Likert scale (1 = *I never would* to 4 = *I absolutely would*).

Independent Variables

Vignette Dimensions Participants were asked to imagine themselves in the same situation as the main character in each scenario and to respond to the questions accordingly. The following variables were measured.

(1) Perception to be tempted: For the underlined sections of each scenario shown in the Appendix, one item was measured: "How much temptation do you feel to commit the illegal conduct?" Responses were made using a four-point scale (1 = *none at all* to 4 = *a great deal*).

(2) Moral context: Based on previous research (Hirtenlehner & Hardie, 2016; Shadman-faat et al., 2020), two items formed an indicator of moral context: "My significant others (for instance, family, close friends) would think I am okay even if I engaged in the illegal conduct" to measure the moral beliefs of associates about the illegal conduct and "My significant others (for instance, family, close friends) would commit the illegal conduct if they were in this situation" to measure the expected degree of associates' engagement in the illegal conduct if they were in the situation. Participants were asked to rate how much they agreed with each statement, using a four-point scale (1 = *strongly disagree* to 4 = *strongly agree*).

(3) Morality: While morality is an extremely complex concept, in SAT, it is conceived of as moral values backed up by secondary moral emotions (anticipated shame and guilt; Pauwels, 2018a). Based on previous research (Hirtenlehner & Treiber, 2017; Svensson, 2015), three items were measured: "The conduct is wrong" to measure moral values; "I will feel guilty if I engage in the illegal conduct" to measure anticipated guilt; and "I will feel shame if my illegal conduct becomes known by significant others (such as family, close friends)" for anticipated shame. Participants were asked to rate how much they agreed with each statement, using a four-point scale (1 = *strongly disagree* to 4 = *strongly agree*).

Individual Characteristic Variables (1) Self-control: To measure self-control, the SAT research of Wikström et al. (2012) used an abridged and slightly modified version of the inventory developed by Grasmick et al. (1993). Later, SAT studies by Hirtenlehner and Hardie (2016) and Pauwels (2018a) revised the modified scale of Wikström et al. (2012). The present study adopted 11 items used by Hirtenlehner and Hardie (2016) or Pauwels (2018a), as shown in Table 1. Participants were asked how likely it would be for you to behave for each item, using a four-point scale (1 = *not likely at all* to 4 = *extremely likely*).

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[3] It is assumed that the dependent variable is also influenced by participants' social learning and modeling of how others behave in such situations.

Table 1 Descriptive statistics and factor loadings of a principal components factor analysis for items of self-control

Items	M	SD	Factor loadings
I often act on the spur of the moment without stopping to think	2.05	0.73	0.72
I often do things without thinking of the consequences	1.94	0.74	0.66
I often take a risk just for the fun of it	1.63	0.76	0.65
I sometimes find it exciting to do things that may be dangerous	1.79	0.81	0.62
If I want something, I do it immediately	2.22	0.78	0.50
I lose my temper easily	1.93	0.81	0.50
I always say what I think, even if it is not nice or smart	2.15	0.71	0.47
I get bored easily	2.49	0.86	0.46

The excluded items are "When I am really angry, other people better stay away from me," "When I have an argument with someone, I can talk calmly about it," and "I often try to avoid things that I know will be difficult"

(2) Independent and interdependent view of self: The short version of the scale developed by Takata (2000) was used. It was comprised of four items for measuring the independent view of self and six items for measuring the interdependent view of self.[4] Participants were asked how likely it would be for you to behave in this way for each item, using a seven-point scale (1 = *not likely at all* to 7 = *extremely likely*).

Analysis Plan

SPSS Statistics 28 was used for the Analysis First, the reliability of the measured scales was examined. Next, a manipulation check was performed to determine whether participants actually felt that the level of temptation was different in the two temptation conditions of each scenario. A check for bias in assigning participants to the two condition groups was also conducted. It is common statistical knowledge that regression analysis can be applied not only to measurements on continuous scales but also to measurements on interval scales. To test Hypotheses 1–5, correlations between the likelihood of committing a crime and other variables were calculated, and multiple regression analyses were also conducted. The interaction term used in multiple regression analyses was created by using the centered values of the respective scale scores. For interactions that were significant in the multiple regression analysis, participants were divided into two groups using morality scores above versus below average, and correlations were then calculated in order to clarify the meaning of the interaction.

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[4] Four items for measuring the independent view of self are "I don't care what others think of me as long as I feel good about myself," "I will stand up for what I believe in, even if others around me think differently," "I always speak my opinions clearly," and "I always speak and act with confidence." Six items for measuring the interdependent view of self are "I care what other people think of me," "I worry about what other people think of me and how they look at me," "How I feel depends on the people I am with and the situation I am in," "I avoid disagreeing with my group of peers," "When I am in conflict with others, I often accept the other person's opinion," and "I change my attitude and behavior depending on the other person or the situation.".

Results

Analysis of Scales

A principal component factor analysis was conducted on the data from the speeding scenario to evaluate if each scale could be considered as a single factor. The results of the principal components factor analysis for morality showed that a single-factor solution emerged, reproducing 75.63% of the variation among these items; factor loadings for each item were 0.83 or greater. The results of the principal component factor analysis for moral context showed that a single-factor solution emerged, reproducing 82.81% of the variation among these items; factor loadings for each item were 0.91 or greater.

Cronbach's alpha reliability coefficients for the morality and moral context scales were 0.84 and 0.79 for the scenario of speeding, 0.80 and 0.76 for the scenario of false application for self-interest, and 0.80 and 0.78 for the scenario of false application for company, indicating high reliability. The responses for the relevant items of each scale were summed.

Because self-control was measured by one factor in previous studies, a principal components factor analysis of self-control was conducted, designating one factor and excluding items with low loadings. The results of the final principal components factor analysis are shown in Table 1. The Cronbach's alpha reliability coefficient was 0.79, indicating high reliability. The responses to eight items were summed up.

The Cronbach's alpha reliability coefficient for Takata's (2000) independent-interdependent self-view scale was 0.75 for the independent scale and 0.86 for the interdependent scale, indicating high reliability.

Comparison of Strong and Weak Temptation Conditions

For all three criminogenic scenarios, the strong temptation condition produced significantly higher scores than the weak temptation condition for the perception of temptation to engage in illegal conduct (speeding: $t(318) = 15.02$, $p < 0.001$, $d = 1.68$; false application for self-interest: $t(318) = 16.65$, $p < 0.001$ $d = 1.86$; false application for company: $t(318) = 9.62$, $p < 0.001$, $d = 1.08$). In other words, in all three scenarios, the two temptation conditions were found to differ as intended.

The results of t-tests showed no significant differences between the participants assigned to the two temptation conditions for the individual characteristic variables of self-control ($t(318) = -0.65$, $p = 0.52$, $d = -0.07$), interdependent view of self ($t(318) = 0.66$, $p = 0.51$, $d = 0.07$), and independent view of self ($t(318) = 1.32$, $p = 0.19$, $d = 0.15$).

Results of Correlation and Multiple Linear Regression Analysis

The moral context was not an objective measure of criminogenic exposure but reflected participants' subjective perceptions. The variable of moral context was coded such that high scores indicated low moral context, and the variable of self-control was coded such that high scores indicated low self-control. The correlations between measured variables by temptation condition are shown in Table 2.

The likelihood of committing a crime was significantly positively correlated with moral context and significantly negatively correlated with morality in all criminogenic scenarios. In addition, the likelihood of committing a crime was significantly

Table 2 Correlation between measured variables by temptation conditions

	1	2	3	4	5	6
Scenario of speeding						
1. Likelihood of committing a crime	–	0.58 ***	−0.56 ***	0.14	0.27***	0.02
2. Moral context	0.37 ***	–	−0.44 ***	0.09	0.05	0.10
3. Morality	−0.54 ***	−0.41 ***	–	−0.11	0.04	−0.19 *
4. Self-control	0.14	0.13	−0.10	–	0.08	−0.03
5. Interdependent view of self	0.01	0.02	0.08	−0.25 ***	–	−0.22 **
6. Independent view of self	−0.15	−0.12	0.13	−0.08	−0.03	–
Scenario of false application for self-interest						
1. Likelihood of committing a crime	–	0.46 ***	−0.54 ***	0.06	0.09	−0.13
2. Moral context	0.44 ***	–	−0.38 ***	0.16 *	0.06	−0.13
3. Morality	−0.56 ***	−0.38 ***	–	−0.09	0.07	−0.08
4. Self-control	0.12	0.11	−0.12	–	0.08	−0.03
5. Interdependent view of self	−0.05	−0.08	0.34 ***	−0.25 ***	–	−0.22 **
6. Independent view of self	−0.12	−0.05	0.08	−0.08	−0.03	–
Scenario of false application for company						
1. Likelihood of committing a crime	–	0.58 ***	−0.40 ***	0.07	0.22 **	−0.32 ***
2. Moral context	0.53 ***	–	−0.20 *	0.11	0.18 *	−0.30 ***
3. Morality	−0.26 ***	−0.36 ***	–	−0.04	0.03	−0.04
4. Self-control	0.23 **	0.26 ***	−0.20 **	–	0.08	−0.03
5. Interdependent view of self	0.16 *	−0.01	0.26 ***	−0.25 ***	–	−0.22 **
6. Independent view of self	−0.28 ***	−0.10	0.11	−0.08	−0.03	–

Above shows the strong temptation condition, below shows the weak temptation condition

$*p < .05$, $**p < .01$, $***p < .001$

and positively correlated with self-control in the weak temptation condition of the false application for the company scenario.

The likelihood of committing a crime was significantly positively correlated with an interdependent view of self in the strong temptation condition of the speeding scenario. In the false application for company, the scenario in both temptation conditions, the likelihood of committing a crime was significantly positively correlated with an interdependent view of self and negatively correlated with an independent view of self.

In addition, moral context was significantly negatively correlated with morality in all scenarios. The interdependent view of self was significantly positively correlated with morality in the weak temptation condition of the scenarios of false application for self-interest and false application for company.

Table 3 shows the multiple linear regression analysis results for each variable for the likelihood of committing a crime. Because SAT holds that the effects of criminogenic scenarios and self-control differ depending on the degree of morality, the variables of the interaction term between morality and.

these variables were also examined. Model 1 shows the results of multiple regression analysis with the variables used in SAT as inputs with interaction variables. Model 2 shows the results of multiple regression analysis with added variables of interdependent view of self and independent view of self.

Table 3 Linear regression prediction for the likelihood of committing a crime

	Speeding		False application for self-interest		False application for company	
	Model 1 β	Model 2 β	Model 1 β	Model 2 β	Model 1 β	Model 2 β
Strong temptation condition						
Moral context (a)	0.40***	0.38***	0.35***	0.32***	0.54***	0.46***
Morality (b)	−0.37***	−0.39***	−0.35***	−0.38***	−0.31***	−0.34***
Self-control (c)	0.07	0.04	−0.01	−0.02	0.00	0.00
b*a	0.05	0.03	−0.18 *	−0.16*	−0.18*	−0.19*
b*c	−0.02	0.03	−0.02	−0.01	−0.04	−0.02
Interdependent view of self	–	0.25 ***	–	0.06	–	0.10
Independent view of self	–	−0.04	–	−0.11	–	−0.19**
The amount of change R^2		0.07***		0.02		0.05***
Adjusted R^2	0.43***	0.49***	0.38***	0.39 ***	0.44***	0.48***
Weak temptation condition						
Moral context (a)	0.19*	0.18*	0.38***	0.36***	0.50***	0.46***
Morality (b)	−0.46***	−0.46***	−0.34***	−0.40***	−0.02	−0.06
Self-control (c)	0.08	0.09	0.04	0.07	0.07	0.11
b*a	−0.08	−0.07	−0.21**	−0.20**	−0.10	−0.13
b*c	0.01	0.01	−0.10	−0.11	−0.05	−0.02
Interdependent view of self	–	0.06	–	0.16*	–	0.23***
Independent view of self	–	−0.05	–	−0.05	–	−0.21**
The amount of change R^2		0.01		0.03*		0.09***
Adjusted R^2	0.31***	0.31***	0.39***	0.41***	0.29***	0.37***

*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$

The *r*-squares for Model 1 were significant in all scenarios. In addition, the results for Model 1 in all scenarios indicate that moral context was significant for the likelihood of committing a crime. In all scenarios except the weak temptation condition of the false application for company scenario, morality was also significant for the likelihood of committing a crime. In both temptation conditions of the false application for the self-interest scenario and in the strong temptation condition of the false application for the company scenario, the interaction term of morality and moral context was significant for the likelihood of committing a crime.

To clarify the implications of the interaction, participants were divided according to the average morality score for each scenario, and the correlations between the likelihood of committing a crime and moral context were calculated. In the strong temptation condition of the false application for self-interest scenario, the correlation of low-morality participants ($N = 69$) was 0.53 while that of high-morality participants ($N = 91$) was 0.30. In the weak temptation condition of the false application for the self-interest scenario, the correlation of low-morality participants ($N = 68$) was 0.38 while that of high-morality participants ($N = 92$) was 0.27. In the strong temptation condition of the false application for the company scenario, the correlation of low-morality participants ($N = 71$) was 0.57 while

that of high-morality participants ($N = 89$) was 0.52. The correlations were higher among low-morality participants than among high-morality participants.

The amount of change from Model 1 to Model 2 was significant in the strong temptation condition of the speeding scenario, in the weak temptation condition of the false application for the self-interest scenario, and in both temptation conditions of the false application for the company scenario. The interdependent view of self was significant in the strong temptation condition of the speeding scenario, in the weak temptation condition of the false application for self-interest scenario, and in the weak temptation condition of the false application for the company scenario. In addition, the independent view of self was significant in both temptation conditions of the false application for the company scenario.

Discussion and Conclusion

This study examined SAT's applicability in scenarios of traffic crime, individualistic white-collar crime, and corporate white-crime among people in their 30 s–40 s in Japan. In each scenario, two conditions of temptation to perform illegal conduct were presented. Because it was confirmed that the two conditions were perceived as representing different levels of temptation in the three scenarios, Hypotheses 1–5 are discussed by condition for each scenario. The scenario-by-scenario discussions are followed by general interpretations and summaries of the key results.

Discussion of Three Scenarios

Scenario of Speeding

As shown in Table 2, Hypothesis 1, which stated that crime propensity, which encompasses morality and self-control, affects the likelihood of committing a crime, was supported for morality in both temptation conditions but not supported for self-control in both temptation conditions. Hypothesis 2 stated that criminogenic exposure, which encompasses moral context and affects the likelihood of committing a crime, was endorsed for the moral context in both temptation conditions.

As shown in Table 3, Hypothesis 3, which stated that both crime propensity and criminogenic exposure predict the likelihood of committing a crime, was supported in both temptation conditions because both moral context as a criminogenic exposure variable and morality as a crime propensity variable significantly predicted the likelihood of committing a crime. Hypothesis 4, which stated that morality interacts with criminogenic exposure and self-control to increase the likelihood of committing a crime, was not supported in either temptation condition because no interaction significantly predicted the likelihood of committing a crime.

Hypothesis 5, which stated that the degree of the interdependent view of self affects the likelihood of committing a crime, was supported only in the strong temptation condition, where the correlation between the likelihood of committing a crime and the interdependent view of self was significant, as shown in Table 2, and the former variable was significantly predicted by the latter variable, as shown in Table 3. In the strong

temptation condition of the speeding scenario, although B obeyed the speed limit, the cars around B were driving over the speed limit, and the car following B honked its horn at B. This scenario presented a conflict between B's own moral judgment that it is right to obey the speed limit and the expectations of those around B to drive above the speed limit. The result indicated that participants with a more strongly interdependent view of self were likely to respond that they would exceed the speed limit along with the other vehicles in such a situation.

Scenario of False Application for Self-Interest

As shown in Table 2, Hypothesis 1 was supported for morality in both temptation conditions but not supported for self-control in either temptation condition. Hypothesis 2 was supported for moral context in both temptation conditions.

As shown in Table 3, Hypothesis 3 was supported in both temptation conditions because both moral context and morality significantly predicted the likelihood of committing a crime. Hypothesis 4 was supported in both temptation conditions in that the interaction between morality and moral context significantly predicted the likelihood of committing a crime. In contrast, it was not supported in that the interaction between morality and self-control did not significantly predict the likelihood of committing a crime. The interaction between morality and moral context suggests that those with low morality were more influenced by moral context than those with high morality.

Hypothesis 5 was not supported in either temptation condition because the correlations between the likelihood to commit a crime and interdependent view of self were not significant, as shown in Table 2.

Scenario of False Application for Company

As shown in Table 2, Hypothesis 1 was supported for morality in both temptation conditions and supported for self-control only in the weak temptation condition. Hypothesis 2 was supported for moral context in both temptation conditions.

As shown in Table 3, Hypothesis 3 was supported in the strong temptation condition because both moral context and morality significantly predicted the likelihood of committing a crime. However, Hypothesis 3 was not supported in the weak temptation condition because only moral context predicted the likelihood of committing a crime; crime propensity (e.g., morality) did not. In the strong temptation condition, Hypothesis 4 was supported in that the interaction between morality and moral context significantly predicted the likelihood of committing a crime. In contrast, it was not supported in that the interaction between morality and self-control did not significantly predict the likelihood of committing a crime in the strong temptation condition. Hypothesis 4 was not supported in the weak temptation condition because no interaction significantly predicted the likelihood of committing a crime.

Hypothesis 5 was supported in both temptation conditions because the correlations between the likelihood of committing a crime and the interdependent view of self were significant, as shown in Table 2. In addition, the correlation between the likelihood of committing a crime and the independent view of self was significant. As shown in Table 3, in the weak temptation condition, both independent and interdependent views of self predicted the likelihood of committing a crime. In the strong temptation condition, the

independent view of self predicted the likelihood of committing a crime. In the scenario of a false application for the company, C was asked to cooperate in writing a fraudulent application to alleviate the company's plight. This is a scenario of conflict between C's own moral judgment that it is wrong to file a false application and the expectations of C's company that employees would cooperate to save the company. Because participants with an independent view of self would tend to act on their own judgment regardless of context, they did not tend to cooperate with writing a false application in such a situation. In contrast, those with an interdependent view of self tended to cooperate with the false application in such a context. Although Hypothesis 3 was not supported in the weak temptation condition, what was measured by morality can be considered rights-based morality. The fact that an interdependent view of self played a role in this condition suggests that duty-based morality may have been in effect.

General Discussion

In all scenarios, greater morality was significantly related to a lower likelihood of committing a crime, while higher self-control had this effect only in the weak temptation condition of the false application for company scenario. Thus, Hypothesis 1 received mixed support. Although the result for self-control may be attributable to the use of the vignette survey method, the results of previous Western vignette studies (e.g., Pauwels, 2018b; Sattler et al., 2022) produced effects of self-control on crime willingness. In a comparative study of the strength of the relationship between self-control and deviant behavior in Japan and the USA, the link was not as strong in Japan as in the USA (Kobayashi et al., 2010). Thus, the present results may be interpreted as a reflection of cultural differences in how self-control is exercised. Nevertheless, the present results support the contention of SAT that morality has more influence than self-control on acts of illegal behavior.

In all scenarios, participants who were more familiar with illegal conduct in their surroundings showed a greater likelihood of committing a crime. Thus, Hypothesis 2 was supported for moral context, although it should be noted that moral context in this study was measured by subjective perceptions of participants.

In all scenarios except the false application for a company with weak temptation, the likelihood of committing a crime was predicted by both crime propensity and criminogenic exposure, thus supporting Hypothesis 3. While SAT tries to bridge environment-oriented and person-oriented explanations of crime, this result shows that both explanations are meaningful. Thus, approaches that ameliorate criminogenic exposure and crime propensity should effectively deter illegal conduct.

Hypothesis 4 predicted that morality would interact with criminogenic exposure and self-control to increase the likelihood of committing a crime. Morality significantly interacted with moral context in both temptation conditions of the false application for self-interest scenario and in the strong temptation condition of the false application for company scenario. On the other hand, an interaction between self-control and morality was not found in any scenario, although lower participant morality was presumed to be associated with greater influence of the moral context. Self-control affected the likelihood of committing a crime only in the weak temptation condition of the false application for company scenario, as noted with respect to Hypothesis 1, but no significant interaction with morality was found. As previously mentioned, Pauwels et al. (2018) cited studies that do not support the postulated interaction between morality and the ability to exercise self-control. Some recent empirical studies, such as Pauwels (2018b) and Song and Lee (2020), also do not

support this interaction. However, it is premature to conclude from these results that SAT is not supported. As did prior studies, including Wikström et al. (2012), the present study used a generalized self-control ability scale to measure self-control. However, self-control in SAT is conceptualized as a situational construct. In other words, it is necessary to measure how well one is able to exercise self-control in the process of deliberation when faced with certain temptations and severe provocations.

Hypothesis 5 predicted that the likelihood of committing a crime would be affected by the degree to which the participant has an interdependent view of self. This was supported in the strong temptation condition of the speeding scenario and in both temptation conditions of the false application for company scenario. These scenarios are situations in which the participant's own judgment of the act itself does not match the expectations of the surroundings. The results showed that those with an interdependent view of self would tend to commit crimes as the result of their intention to act in accordance with the expectations surrounding them in the situation. This pattern of results reveals the significance of the two types of morality, rights-based and duty-based. The latter type considers the duty to adjust behavior as expected in the surroundings as the fundamental justification for the moral rightness of human action. Those with an interdependent view of self may make behavioral choices based on duty-based morality. Morality is a broad concept, and Trivedi-Bateman (2021) examined the influence of moral emotions on being involved in crimes. While SAT assumes that both propensity toward crime and exposure to criminogenic scenarios should be considered, the present results indicate that there are individual differences in the way people are affected by environmental influences. These results imply the existence of context-dependent duty-based morality, in addition to rights-based morality, which judges behavior as correct or wrong without considering the surroundings.

Limitations and Future Research

The extent to which the results obtained in this study can be generalized remains to be examined.

First, this study was limited to people in their 30 s–40 s for the sake of scenario compatibility. Other age groups may differ in crime propensity and in exposure to criminogenic situations that could produce interesting patterns of results. In addition, it is not certain that those who participated in the online survey represented those in their 30 s–40 s accurately.

Second, this study provided a novel application of SAT for corporate white-collar crime, as well as traffic crime and individualistic white-collar crime, which have been previously studied. However, only one scenario was selected for each type of crime. Thus, it is not certain whether the present results are specific to the scenarios used in this study. It is a future task to examine the applicability of SAT to each type of crime by examining multiple situations.

Third, the vignette method required participants to imagine a situation in which they were placed and to evaluate how likely they would be to commit the given crimes. It is possible that participants may not behave as they imagined in an actual situation.

Contrary to the assertion of SAT, the effect of self-control on the likelihood of committing a crime was not fully confirmed. The result may be characteristic of Japanese people in their 30 s–40 s that participated in this study. In addition, the fact that the scenarios used in this study did not require an immediate decision about whether or not to choose criminal behavior may have also influenced the results. This point will be clarified in the process of

verifying the results by using various scenarios in the future. Furthermore, the concept of self-control in SAT is the ability to use self-control in a certain situation, whereas the present study only measured a general tendency for self-control. Therefore, a device to measure the ability to exercise self-control in each situation is required in future research.

In SAT, morality is a crucial concept that influences the likelihood of committing a crime. Previous empirical studies of SAT have used rights-based morality. But because Japan, an East Asian country, has an interdependent cultural background, the morality of Japanese people may include the consideration of surrounding people. Although this was not a cross-cultural study, it measured the view of self as an individual difference and found that these variables had effects on the likelihood of committing crime in some scenarios. These results suggest the relevance of other forms of morality in addition to rights-based morality, such as the consideration of surrounding expectations. Because previous empirical studies of SAT treated only one-dimensional rights-based morality, measurement of duty-based morality would be worthwhile. In addition, the result that the impact of the view of self variables varied among scenarios suggests that different forms of morality may be activated in different situations. In other words, duty-based morality is not only helpful when considering the application of the SAT in East Asia but may also be applicable to some situations, even in the West. Examining the content of morality in empirical studies of SAT may improve the fit of SAT in explaining crime phenomena.

Appendix

Scenarios of criminogenic scenes.

< Scenario of speeding as traffic crime: Strong temptation condition >

B may not be able to get another job depending on how well B does in an important meeting. B does not have much money saved up, and if B loses B's job, B will be in trouble right away.

B thought B had plenty of time to get to the meeting place for the important meeting, but B was stuck in a huge traffic jam. B finally made it to a road where cars were flowing, but if B drove according to the speed limit, B would be late for the appointment. If B is late, B may damage the image of the company, and B's work may be affected.

B is a confident driver and has never had an accident.

There seem to be many cars driving over the speed limit on that road. The car of B, which is obeying the speed limit, is overtaken by one car after another. The car following B even honked its horn.

*In the weak temptation condition, the two underlined parts above are replaced with "keeping the speed limit" and "maintains a certain distance from the cars in front and behind it."

< Scenario of false application for self-interest as individualistic white-collar crime: Strong temptation condition >

A is unemployed. Although A has been looking for a job, there is no prospect of finding another one. A did not have much savings to begin with, but with no income, the savings are dwindling rapidly.

Under these circumstances, A received information that A could receive a subsidy if A applied for one. With the grant, A would be able to afford to live for about six months.

However, upon closer examination, A found that although it seemed that A should be eligible for the grant, A did not actually meet the conditions for the grant.

However, it was only a matter of bending the facts a little in applying for the grant, and in fact, there were stories on the Internet about people who had received grants as a result.

When A told A's acquaintance that A was not eligible for the grant, the acquaintance replied, "You can't survive with good-natured stupidity and honesty. That kind of passive attitude is why you can't get another job."

*In the weak temptation condition, the underlined part above is replaced with "I'm sorry to hear that. I will keep this in mind to see if there is any other way."

＜Scenario of false application for company as corporate white-collar crime: Strong temptation condition＞

C is an employee of a company and has no particular complaints about the company, including C's own treatment. C does not have much money saved, and C's livelihood depends on C's salary from the company.

Under these circumstances, C's boss told C that if C applied for a certain subsidy, the company would receive it, and the boss asked C to apply for it according to a model. However, the content of the application was not true. The boss explained that the company was in a very difficult business situation, and the boss feared for the company's future if the situation continued.

The boss explained that many other employees had filled out these forms, and the boss showed C a stack of completed forms.

The boss told C, "Just write down exactly what it says. Or are you going to be ungrateful and destroy the company that has taken care of you so far?".

*In the weak temptation condition, the underlined part above is replaced with "I am asking you to do it because of my position, but I will leave it to your judgment. I won't force you to write it."

Data Availability The data storage period for this study is until December 2028.

Declarations

Ethical Approval All procedures performed in studies involving human participations were in accordance with the ethical standards of the Ethics Review Committee on Research with Human Subjects of Waseda University (Application No. 2022–395).

Consent to Participate Informed consent was obtained from all individual participants included in the study.

Competing Interests The author declares no competing interests.

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