

# Theory of Planned Behavior: Origins, Development and Future Direction

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**Abstract:** This essay firstly introduces the origins of the Theory of Planned Behavior (TPB) with detailed description of the concept of the variables contained in the TPB, the basic construct of the TPB and its application in fields including social psychology, health communication, marketing, management and clinical medicine. Then this essay reviews the development history of the concept of variables constituted the TPB and the research related to factors and theories influencing the TPB as well as the instruments for measuring the TPB in previous studies. The application of the TPB in various areas and is also analyzed in details. Based on the review of the cutting-edge studies with application of the TPB, this essay points out the limitations related to the exploration of the application of the TPB in research and provides suggestions for future research. Finally, this essay emphasizes the potential of utilizing the TPB in the communication field, especially in Chinese academia.

**Keywords;** health communication, model development, theory application

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Date of Sumisión: 12-05-2018

Date of aceptante: 28-05-2018

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## I. INTRODUCTION

The theory of planned behavior (TPB) is a full-fledged social psychology theory, and has been widely used in the fields of management, nursing, marketing, and etc. However, the TPB has not been given adequate attention in communication studies in China. This paper makes a comprehensive review on the origins, basic construct, and cutting-edge studies on TPB, as well as analyzing the development status and future direction of TPB in the communication studies in China.

## II. ORIGINS AND CONNOTATIONS OF TAB

The theory of planned behavior (TPB), deriving from theory of multiattribute attitude (TMA) and theory of reasoned action (TRA) (Ajzen & Fishbein, 1973), is a social-psychological theory that explains behavioral decision-making processes of human beings with aiming at understanding and predicting the behavior of individuals, advocating that the successful completion of human behaviors are mainly controlled by individual will. According to TRA, the behavior intention of individuals is determined by two factors of attitude and subjective norm, in which the subjective norm is influence by normative beliefs in the society and the attitude can be divided into positive or negative aspects.

Ajzen (1985) held that human behavior is more often affected by the factors of external and objective circumstance rather than completely controlled by individual will. In order to add the power in prediction and explanation of TRA on human behavior, Ajzen (1985) added the variable of perceived behavioral control besides subjective norm and attitude, and extended and revised the structure of TRA as shown in Figure 1:

### 1) Beliefs

Beliefs can be divided into three categories of behavioral beliefs, normative beliefs and control beliefs (Ajzen, 1991; Doll & Ajzen, 1992). According to the meta-analysis of Armitage and Conner (2001), the behavioral beliefs, normative beliefs and control beliefs can respectively explain 25% variance of attitude, 25% variance of subjective norm and 27% variance of perceived behavior control. All other internal factors (e.g., personality, intelligence, experience, age, gender, etc) and external factors (e.g., information, context, cultural background, etc) indirectly affect attitude, subjective and PBC through directly affecting beliefs.

### 2) Behavioral intention

In TPB, behavioral intention is the tendency of individuals on pursuing an act, which can also be called

the subjective probability (Fishbein&Ajzen, 1975) of individuals in seeking to engage in particular acts. Therefore, according to TRA, behavioral intention is the most appropriate variable to predict behavior.

In decision-making process, the three factors of attitude, subjective norm and perceived behavioral control are likely to codetermine the behavioral intention of individuals, or each of the three factors directly change the behavioral intention, which means the three factors may influence each other or has different influence on behavioral intention separately.

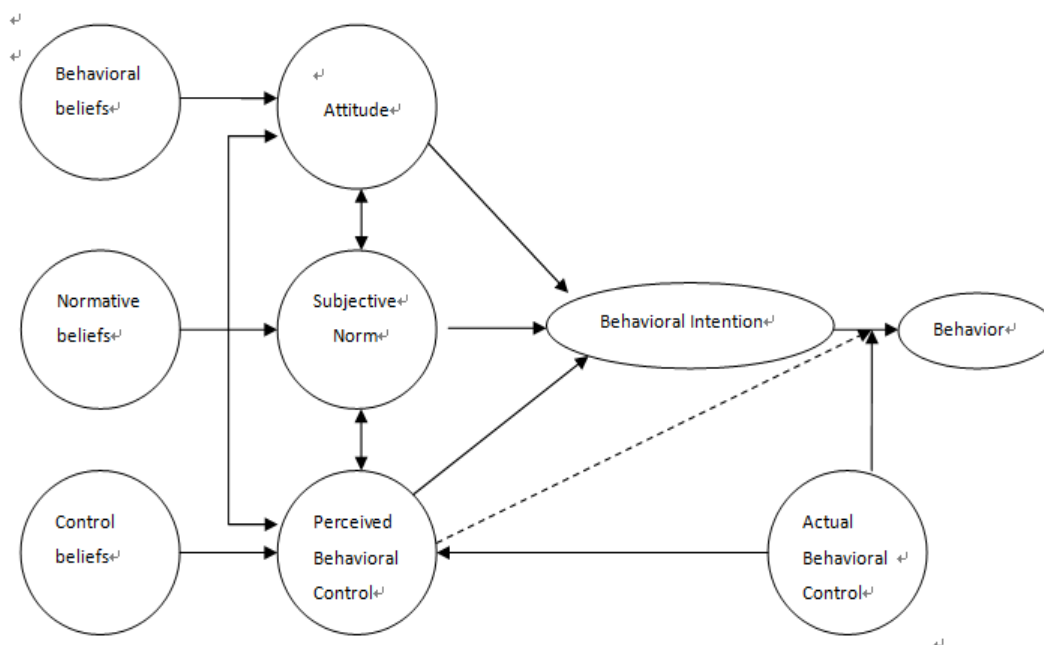


Figure 1: Revised Model of the Theory of Planned Behavior (Ajzen, 2006)

### 3) Subjective norm

Subjective norm refers to the social pressures that individuals feel in performing particular acts, namely the pressure from the persons or groups who are important to the individuals in agreeing or disagreeing with the individuals to take particular acts (Dubinsky &Loken, 1989).

It is pointed by that the subjective norm is the weakest element that influences the behavior, but the influence of subjective norm on negative behavior, such as illegal downloading, buying pirated, risky sexual behavior and so on, is very significant (Fishbein&Ajzen, 1975).

### 4) Attitude

In TPB, there are two factors deciding behavioral intention, including the individual nature and the impact of society on individuals, in which the individual nature is defined as the positive or negative evaluation of individuals on the particular acts they engage in, namely the attitude of individuals. The more specific the attitudes and behaviors are, the more obvious the correlation degree between attitudes and behaviors is (Ajzen&Fishbein, 1980). Attitude is usually the most powerful predictor of the behavioral intention (Ajzen, 1991; Lim &Dubinshy, 2005).

### 5) Perceived behavioral control

Perceived behavioral control is generally considered to be derived from the Self-Efficacy Theory of Bandura (1977). Perceived behavioral control means refers to the controllable degree that individuals feel when taking particular acts, which depends on three factors of capabilities, resources and opportunities (Ajzen, 1985). The more capacities, resources and opportunities individual think they own in taking particular acts, the less expected obstacles and the stronger the perceived behavior control individuals have. Conversely, when people are lack of capacity, resources or opportunities to perform a particular act, or similar past experience of people make them expect that it is difficult to implement a particular act, people will not have a strong intention to carry out the act.

### 6) Scope for TPB application

TPB is not the theory of everything. Instead, it has a strict scope of application.

Firstly, the object of TPB is rational individual behavior. The behaviors of individuals in the collective

(e.g., rallies, parades and community debates), the behaviors driven by emotion (e.g., sadness, anger and excitement) and the behaviors made by individuals for the collective (decision making), are not included in the objects of TPB (Bagozzi, Dholakia & Mokerjee, 2006).

Secondly, TPB examines only the specific individual behavior at specific time, within specific context and with specific objectives (such as watching a movie at the weekend) instead of general behaviors (such as watching movies) (Ajzen&Fishbein, 1977).

Thirdly is the principle of consistency. All elements of TPB model must focus on the objects belong to the same levels. That is, the research must consider the specific attitude, specific subjective norm and their corresponding impact on specific behavior. Some studies that have failed to support TPB are contrary to this principle, such as predicting general behavior of watching movies by using the specific attitude of being willing to watch one film or not, or predicting specific behaviors by sing general attitudes (Armitage & Christian, 2003).

Fourthly, TPB is usually used to predict new behaviors without including repetitive behaviors and habits in the stable context (Ouellette & Wood, 1998). Some studies expanded the scope of application of TPB through adding a new variable of existing experience and habits, but it is not the original intention of TPB.

### **III. IMPROVEMENTOF THE VARIABLES IN TPB MODEL**

Since the advent of TPB, many results of empirical studies have proved that TPB is a theory with considerable predictive power that connects attitudes with behaviors. However, there are also some scholars questioning the perspectives of TPB, which these questions and challenges have promoted the improvement of TPB.

#### **1) Relative importance of the three variables**

The meta-analysis of Armitage and Conner (2001) showed that attitude, subjective norm and perceived behavioral control can interpret only 39% variation of intention and 27% variation of behavior in different fields. Moreover, compared with attitude and perceived behavioral control, subjective norm has less significant correlation relationship with intention and behavior. Thus, these elements cannot interpret all the variation of intentions and behaviors.

For the different role of the three variables in predicting intention and behavior, Ajzen and Fishbein (2004) stated the relative importance of the three variables in predicting intention and this prediction could change due to variations between behaviors and population groups. Under certain circumstances, it is not necessary for all the three antecedents to participate in the prediction but only one or two of them may be required.

#### **2) Others factors that influence the intention and behavior**

##### **a. Past behavior**

Beck and Ajzen (1991) put forward some other factors besides the above three variables, for example, when doing research on fraudulent conduct belonging to dishonest actions, moral obligations was another potential determinant factor of the intention. Rhodes and Courneya (2003) pointed out that if past behavior was related to future behavior, then, in addition to attitudes, subjective norms and perceived behavioral control, past behavior should also be included in the model.

##### **b. Self-efficacy**

Self-efficacy refers to the individual's belief in his own ability to organize and perform an act in order to reach some achievements (Bandura, 1997). The difference between self-efficacy and PBC is that, PBC is the perception of one's ability in controlling external factors to reach a certain behavior, while self-efficacy is the perception of the individual on disposable internal elements and the extent to utilize the internal element to reach a certain behavior (Rodgers, Conner & Murray, 2008). The important role of self-efficacy in intention and behavior has been proved by many empirical studies (Corbett, 2002; Rodgers, 2008; Wang, 2009).

##### **c. Implementation intention**

Although most studies support the high correlation between behavioral intention and actual behavior, the behavioral intention is not equal to the direct behavior. Ajzen et al (2009) refined the behavioral intention and held that the accurate implementation intention can predict accrual behavior better than the general behavioral intention. Implementation intention refers to operational intention of individuals on the time, place and manner of implementing a behavior. Whether the implementation intention exists affect the actual behavior, while the degree of implementation intention has no difference in affecting the actual behavior (Ajzen, Czasch& Flood, 2009).

### **3) Development of PBC**

In order to clarify and resolve the issues of the vague in nature of the term of perceived behavioral control and how to measure it, Ajzen (2006) pointed out that, the key to increase the perceived behavioral control is to try to study the status of individuals when they are lacking of complete control on their willing, to accommodate the inherent non-volitional elements. Perceived behavioral control can indirectly affect behavior through its effect on intention. Moreover, when perceived behavioral control is a real existence, it not only provides useful information for individuals in implementing control behavior in certain contexts but can also be regarded as an additional predictor of behavior (Ajzen, 2006). According to this perspective, Ajzen (2006) pointed out that the perceived behavior control should be understood as perceived control over performance of a behavior.

Moreover, after controlling all the variables reflected in TPB model, some studies have reported the effects of many new variables on behavioral intention or actual behavior, such as degree of desire (Perugini&Bagozzi, 2004), mood and emotion (Armitage, Conner & Norman, 1999), degree of association (Cooke & Sheeran, 2004), interchange activities related to behavior (Neuwirth& Frederick, 2004), expected degree of regret (Abraham & Sheeran, 2003), individual difference (Sheeran et al, 2002) and so on. But the effects of these variables are generally small. The action conditions of these variables are subject to particular restrictions and their reliabilities have yet to be tested repeatedly in more studies.

## **IV. COMPREHENSIVE DEVELOPMENT OF TPB**

In the recent decade, TPB gains a comprehensive development. The founder of TPB, Ajzen and his partners, published dozens of monographs to do thorough discussion, reflection and analysis on the three main variables (attitude, subjective norm and perceived behavioral control) and three corresponding beliefs (behavioral belief, normative belief and control belief), and made now arguments to improve the rigor and scientificity of TPB model. Meanwhile, Ajzen established the standards and criterions for constructing TPB questionnaire in terms of its concept and methodology.

### **1) Standards and criterions for constructing TPB questionnaire**

In terms of the questionnaire construction of TPB, Ajzen (2006) firstly put forward the TACT principle that defines a behavior from the element of target, act, context and time. In order to make sure that the measurement of behavior, intention and attitude are accurate, researchers must ensure the high degree of internal consistency and stability (rest-retest reliability) of the settings used for measuring the prescriptive and descriptive projects of subjective norms (Ajzen, 2006).

### **2) Uncertainty relationship between intention and behavior**

In addition, Ajzen et al (2009) further explored the uncertainty correspondence between intention and behavior that people did not always act in accordance with their original intentions. Through empirical research, they revealed that there was some distance not easy to achieve between intention and behavior, wherein there are at least three important concepts of implementation intention, commitment and conscientiousness (Ajzen et al, 2009). The relationship between the three concepts and intentions and behaviors indicated that the implementation intention created a kind of commitment for the planned behavior, greatly inspiring the conscientiousness of individuals in performing acts and level of their task performance. The high conscientiousness of individuals is more likely to exhibit the feature of the individual intention than the low conscientiousness (Ajzen et al, 2009). The support for the proposition had come from the meta-analysis of Bogg and Robert (2004) in the health field, which reflected that, compared with individuals with low conscientiousness, the individuals with high conscientiousness rarely engaged in risky behavior and are more likely to engage in healthy behavior. Rhodes et al (2005) also supported this argument that the conscientiousness could adjust the relationship between intention and behavior. In terms of how to bridge the gap between intention and behavior, Ajzen (2009) pointed out that two kinds of interventions might be required that the purpose of one intervention was to produce a kind of desired intention and the purpose of another intervention was to promote the performance related to desired behavior.

### **3) Norm-Focus Theory**

According to the Norm-Focus Theory, norm is a multidimensional concept mainly including three dimensions of injunctive norm referring to how important others think individuals should do, descriptive norm referring to how important others themselves do, and personal norm referring to how individuals think they should do (Reno, Cialdini&Kallgren, 1993). The subjective norm of TPB is limited to the dimension of injunctive norm, which is might be the reason that why the consistency between subjective norm and intention and behavior in TPB is relatively low in long-term (Rivis& Sheeran, 2003). As injunctive norm is the subjective

norm perception of individuals arising from the motives of obeying the important others, while descriptive norm is the subjective norm perception of individuals arising from the motives of learning and imitating the demonstration made by important others based on their own behaviors (Cialdini, Reno, & Kallgren, 1990).

Personal norm, also known as moral norm, refers to the internalized moral pressure that individuals feel when doing or abstaining certain behavior, which its role in predicting negative social behaviors is particularly notable (Godin, Conner & Sheeran, 2005; Kiriakidis, 2008). For example, personal norm is the main predictive factor of the drug use behavior of adolescents (Elek et al., 2006) as well as the repeated mistake behavior of individuals (Kiriakidis, 2008).

#### **4) Influence of culture on subjective norm**

Cultural property has become a moderator variable between subjective norm and intention. In the collectivist culture, the influence of subjective norm on intention is larger than the influence of perceived behavior on intention (Wu, Li & Wu, 2010; Deng, 2012), while it is just the opposite in the individualistic culture (Bagozzi, Lee & Loo, 2001).

However, it is impossible to generalize the regulatory role of culture which relies on different behavioral contexts. In terms of the negative behavior which is harmful to society, even the individualist culture could highlight the impact of subjective norm, which this kind of subjective norm mainly comes from peer pressure rather than the collective pressure (Fields, 2002). In terms of the positive behavior which is consistent with subjective norm, the pressure of subjective norm is not significant even in the collectivist culture (Johnson, 2007).

### **V. THE APPLICATION OF TPB**

The application of TPB can be summarized into the following three categories.

#### **1) Predicting individual behavior**

Although the original purpose of TPB is to explain how individuals plan their behavior to achieve specific goals, most studies have focused on how to predict individual behavior through influence various elements in order to achieve specific objectives, which such studies are widely seen in the areas of health communication, marketing, management, clinical medicine and so on. The research objects include gender health behavior (Basen-Engquist & Parcel, 1992), smoking/smoking cessation (Lee et al., 2006), alcoholism/abstinence (Trafimow, 1996), tourist behavior (Shen, 2011), volunteers' behavior (Xu, Li & Jiang, 2012), physician prescribing behavior (Zhu, 2012), green consumption behavior (Sparks & Shepherd, 1992; Lau & Wu, 2013), fitness and slimming (Armitage & Conner, 2001), exercise behavior (Becker & Maiman, 1975; Janz & Berker, 1984; Prochaska, Diclemente & Norcross, 1992; Hansenblas, Carron & Mark, 1997), physical education (Xue, 2015) and so on.

#### **2) Cross-cutting expansion of TPB**

As new media becomes part of everyday life, researchers try to investigate the predictive power and explanatory power of TPB on online behavior, which this type of research focuses on the first decade of the 21<sup>st</sup> century, and the research objects include online shopping (Lim & Dubinsky, 2005), online service (Hsu & Chiu, 2004), online activities (Quick, Lev & La Pastina, 2007), online banking use behavior (Dai & Li, 2010) and so on. Currently, there is still no consistent conclusion of the function mode of TPB in the network environment. However, most studies have shown that, compared to realistic behavior, the influence of attitude on online behavior increased slightly, and the influence of subjective norm on the negative behavior was still powerful, while the influence of PBC was greatly diminished.

#### **3) Intercultural application of TPB**

TPB was put forwarded and detected in the context of the North American culture, thus many researchers dedicated to detecting its adaptability in different culture contexts. For example, a study related to blood donation behavior found that the predictive power of TPB on behaviors of Asians (Korea, Japan) was significantly lower than that on behaviors of Westerners (America), as the subjective norm of Westerners was closer to general social norms while the subjective norm of Asians were mainly from obeying the expectation of family members (Bresnahan et al., 2007). In addition, the consistency relationship between behavioral intention and actual behavior was subversive in Korean that only 17% of the Korean people who expressed will to donate blood actually implemented donation behavior, while the rates were separately 61% and 77% in America and Japan (Bresnahan et al., 2007), which this study has made useful exploration of the intercultural application of TPB.



## **VI. LIMITATIONS OF TPB AND FUTURE DIRECTION SUGGESTED**

Like any kind of theoretical model in development and improvement, TPB has also revealed some limitations and shortcomings in the long-term practice.

It seems that not all social behaviors can be explained by TPB because the inexplicable behavioral variations should not be solely attributed to random errors and there should still be some unmeasured factors. As East (2000) pointed out that TPB in the retail situation did not seem to predict the tendency of complaining on products.

One main limitation of TPB is that, compared with other affective processing models, TPB somehow ignores the emotion such as threats, fear and positive or negative feelings with relatively scarce arguments on them (Bergman, 2005). Armitage et al (1999) particularly verified whether mood could affect attitude, subjective norm, perceived behavior control and intention to a considerable extent. When the participant is in a negative emotional state, the attitude is more likely closely related to intention, while when the participant is in a positive emotional state, the subjective norm is more likely closely related to the intention (Armitage et al, 1999). Especially in areas related to health behavior, it is necessary to notice that, the health behavior of most people are influenced by the affect-laden nature of personal emotion, temperament and mood. Therefore, negative or positive emotions should be regarded as an indispensable variable in predicting health-related behavior. Moreover, stress seems to be able to limit and weaken relationships between intention and behavior, for example, when participants are in a state of intense work, their exercise behavior is hardly influenced by their intention of taking exercises (Payne, Jones & Harris, 2002).

Based on the analysis of the limitation of TPB, we can know that the application scope of TPB is only limited to individual rational behavior. However, from a physiological point of view, no human behavior can exist out of emotion. The emotional response based on the autonomic nervous system is prior to the cognitive reaction and sets the tone for the latter. Thus, the ideal TPB model based on rational individual behavior does not provide an accurate explanation for individual behavior related to emotion. Therefore, in the future study, how to utilize TPB to explain the individual behavior related to emotion is an issue needed to be explored.

In addition, the implicit premise of TPB is regarding people as homogeneous individuals who realize behavioral intention decision based on three modules of attitude, subjective norm and PBC, which the elements of differences in individuals, culture and contexts are excluded from the theoretical model. TPB weakens or even ignores the specific and differences of human behavior, predicting human behavior in a simple linear model. The future study should take the influence of differences of individuals, culture and contexts into consideration when studying specific individual behavior in certain cultural context.

## **VII. RESEARCH ON TPB IN CHINA**

An earlier study in China based on the TPB theoretical framework is the article related to how theory of reasonable behavior, theory of planned behavior and social cognitive theory predict physical exercise (Li, 1999). Since then, the socialpsychologists in China have begun to pay attention and implement the empirical study on TPB. TPB was firstly introduced in the field of social psychology with a large number of empirical studies as well as systematic reviews based on these empirical studies, including HIV risk behaviors (Liu &Cai, 2008), tourist behavior (Shen, 2011), volunteers' behavior (Xu, Li & Jiang, 2012) and etc. The research related to TPB in the fields of marketing and management include online banking use behavior (Dai & Li, 2010), credit card use intention (Wang, Yao & Zheng, 2011), green consumption behavior (Lao &Wu, 2013) and etc. Clinical research and health communication related to TPB include physician prescribing practices (Zhu, 2012), physical exercise behavior (Zhang, 2012), physical education (Xue, 2015) and etc. Such studies are often able to combine with the practice in China and can be used to guide and predict the behaviors of consumer, patients and audience in the cultural context of China. However, such empirical studies tend to be confirmatory studies and are lack of the in-depth discussion of the theoretical model and the exploration of new variables in the Chinese cultural context.

TPB has not gained much attention of the communication scholars in China. According to keyword search in the CKNI net database, only several articles exploring behaviors of migrant workers (Yu, Zhou &Ou, 2010),college students (Xia et al, 2012), micro-blog users (Peng, Zhu & Wang, 2013) and users of sports APP (Liu, Wang & Qian, 2015) referred to or invoked the TPB model. Compared with the wide range of application of TBP in communication studies in western countries, there is large space for the development of the application of TPB in the communicationfield in China. As TPB has been a research hotspot in the contexts of new media and western countries, which means that the Chinese communication scholars could directly participate in the latest development of the theory.

## VIII. CONCLUSION

In general, after nearly 30 years of improvement, integration and development, TPB has become one of the most influential theoretical frameworks with growing popularity of exploring human behavior. It can be predicted that in the near future, TPB is sure to have a broader and deeper development prospect in predicting, intervening and changing human behaviors.

In addition to help people in predict and explain human social behavior, TPB can be also regarded as a unified framework, binding and absorbing various concepts and ideas of predicting and explaining human behavior in different areas. But we also need to pay attention that TPB is not an exhaustive model. In addition to the basic module, there are still a lot of spaces left for new moderator, mediating variables and even independent variables.

It is a good foothold for promoting the communication studies in China to develop simultaneously with the frontier of the world by fully exploring and utilizing the growing TPB theory.

### Biographical information

**Ke Zhang** is Ph.D. candidate at the Department of Communication Studies, Hong Kong Baptist University. Her research interests include consumer behavior, celebrity endorsement and branding. She finished her MA study in Global Media at Karlstad University, Sweden. She has worked as a journalist, advertising planner and university teaching staff prior to assuming her PhD studies.

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Ms. Ke Zhang "Theory of Planned Behavior origins, Development and Future Direction" *International Journal of Humanities and Social Science Invention (IJHSSI)* 7.05 (2018): 76-83.