



Materialism and tattoo consumption. An extension of the Theory of Planned Behavior in Romania

Marta Giovannetti, Francesco Raggiotto

Luglio 2017

4 / 2017

Sezione di ricerca: *Management e Organizzazione*

Materialism and tattoo consumption.
An extension of the Theory of Planned Behavior

Marta Giovannetti
Graduated Master Student
Università Politecnica delle Marche - Department of Management

Francesco Raggiotto (corresponding author¹)
Ph.D. Student
University of Udine - Department of Economics and Statistics

Abstract

In the last few years, tattoos have gained an increased popularity, to the point that they are no more generally related to deviant and subcultural contexts, rather they have become a popular phenomenon, feeding a *market* by all means. Consequently, the majority of the existing literature is denoted by psychological and sociological approaches. In a different fashion, marketing and consumer literature has rarely approached tattooing as a consumption phenomenon *tout court*.

This work provides a quantitative description of antecedents of tattoo consumption, using an extended version of the Theory of Planned Behavior (Ajzen, 1985; 1988; 1991), that considers the mediating effect of materialism. Data (N=138) were modeled with Hierarchical Moderate Regression Analysis (HRMA).

Results show that the proposed model adequately describes tattooing intentions; materialism showed to have a positive, mediating effect between the antecedents of intention and the intention itself.

1. Introduction

This work provides a quantitative description of tattooing as a consumption phenomenon. With tattoo consumption dynamics having evidently evolved in recent years -to the point that nowadays tattoos are increasingly likely to be considered as “products”²-, apparently, there is a need to consider tattooing under the lenses of marketing and consumer behavior sciences.

It is undeniable that tattooing has become relevant as either a cultural and an economic phenomenon; therefore, the current challenge has become to address this topic from a perspective that include the vast and varied set of motivations underlying tattoo consumption.

Many scholars indicated that gender, age, and values -including materialism- are determinant for tattoo adoption, symbolism, and placement in visible body locations (i.e. Watson, 1998; Pentina & Spears, 2011). Since values and symbolism are so embedded with the cultural context, it appears relevant to take into consideration the cultural peculiarities of tattoo consumers and how their background influences their motivational pattern towards to tattoo consumption.

The present study considers as its research context an emerging Eastern European market (Romania): it appears particularly interesting to test consumption dynamics and motivations in such a context, in which historical, economic and cultural background differ significantly from the western

¹ francesco.raggiotto@uniud.it

² We refer here to products as “the output of a production process of any kind and created to be exchanged between the producer and other economic agents” (see Rispoli & Tamma, 1992)

consumer society, In particular, the study will focus on the influence of materialism over the consumer culture and, specifically, tattoo consumption.

The purpose of this work is to observe tattoo consumption with a quantitative analysis, that aims to describe the tattoo consumption behavior and its antecedents. To do so, we engaged the Theory of Planned Behavior - TPB (Ajzen, 1991) model, which describes the behavior from intention and its antecedents (attitude towards behavior, subjective norm and perceived behavioral control). In addition, we added materialism as a moderating variable, to enforce the descriptive power of the effective, yet synthetic, TPB, to study the role of materialism in conditioning tattoo-related choices (purchase and location).

The present study is based on a broader research project run by a conjoint research team including the Università Politecnica delle Marche and the University of Udine, whose aim is to study tattooing as a consumption phenomenon. That project also involved the development of a TPB-inspired model, moderated by materialism, to draw conclusions on tattoo consumption dynamics in that cross-cultural context. Data have been collected through a survey performed in April 2016, at the International Tattoo Fest Iasi (a tattoo convention located in Romania) were finally analyzed with a Hierarchical Moderated Regression Analysis (HRMA)

2. Conceptual framework

2.1. The theory of Planned Behavior

The present study is based on the well-established framework known as the Theory of Planned Behavior (TPB, Ajzen, 1985; 1988; 1991). In this paper, the TPB is further expanded to adapt it to the specific context of body modification consumption.

In its original formulation, the TPB considers the effect of three conceptually independent determinants of behavior (B): the attitude towards the behavior (AB), the subjective norm (SN), and the perceived behavioral control (PBC).

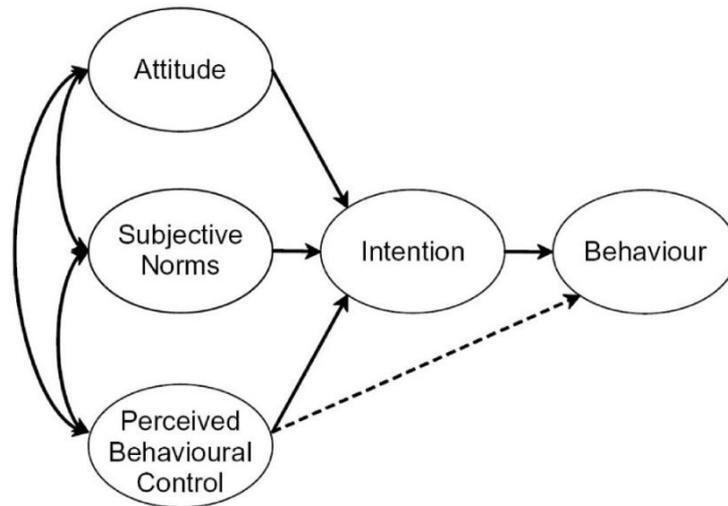
Particularly, the model is made of the following components:

- AB – attitude towards the behavior – is the degree to which a person has a favorable or unfavorable evaluation of appraisal of the behavior in question;
- SN – subjective norm – is the perceived social pressure to perform the behavior or not;
- PBC – perceived behavioral control – is the perceived ease or difficulty to perform the behavior, and is assumed to reflect past experience, as well as anticipated impediments and obstacles;
- BI – behavioral intention - is the intention to perform various behaviors;
- B – behavior - is the observable act of the subject (overt behaviors) or definitions of the individual's intentions (covert behaviors) (Fishbein & Ajzen, 1975).

The central construct of the model is the intention to perform a specific behavior (Figure 1).

It is worth noting that both TPB and its conceptual predecessor, the Theory of Reasoned Action (Ajzen & Fishbein, 1975) apply to the “redefined homo oeconomicus”: the traditional conception of “homo oeconomicus” is perfectly rational, selfish and optimizing, while “the person who does reasoned action” has a scarcer knowledge of the outcomes of an action, and considers just the consequences that can easily be evoked. Indeed, actions are made in consequence of the norm influence of other individuals or groups. Individuals have limited possibilities of realizing their preferences, therefore the theory makes predictions on intentions, not on actions. Often the action follows the intention, but circumstances can block or modify intentions, then the following actions do not conform to what previously planned.

Figure 1. The theory of planned behavior – TPB



Source: Ajzen, I.. *The theory of planned behavior. Organizational behavior and human decision processes*, 1991, 50.2: p.182.

Intentions are assumed to capture the motivational factors that influence a behavior; they are indications of how hard people are willing to try, to make an effort, to perform the behavior. As a general rule, the stronger the intention, the more likely is the behavior to be performed. However, a behavioral intention transforms into a behavior if it is under volitional control, in other words, if the person can decide to perform the behavior.

In this theory, like in the Theory of Reasoned Action (Ajzen & Fishbein, 1975), the attitude towards the behavior (AB) is the result of the sum between the evaluations of the resulting action, while the subjective norm (SN) measures the inclination of the subject to act in the way (relevant) people think they should, meanwhile the perceived behavioral control (PBC) is measured as the self-perceived capability of behaving in a certain manner, whenever the individual wants to, thus it is an index of freedom.

Also, the PBC is a determinant factor on the intention as well as AB and SN, and Ajzen and Madden (1986) stress that previous experience and PBC sometimes overlap, because the first reveals the actual opportunities and personal capabilities that form the PBC.

Ajzen focuses on situations that go beyond the totally controllable aspects of human behavior, - the relation between PBC and behavior. Empirical evidence provided by literature shows that both predictors, intention and perceived behavioral control, correlate well with the behavioral control. Combination of intention and perceived behavioral control permitted significant predictions of behavior in each case, and many of the multiple correlations were of substantial magnitude.

The reason why this model was chosen as a reference in this work is that it still represents one of the most complete and intuitive models in its field. Scholars have recognized the exceptional role of the TPB in the description of behavior and its antecedents, plus it is simple and compact in structure, so it is straightforwardly usable in many fields.

Further research has validated this model in literature despite its limitations (Van den Putte, 1991; Godin & Kok, 1996; Hausenblas, Carron, & Mack, 1997; Conner & Armitage, 1998; Sutton, 1998).

Some scholars have suggested alternative constructs to improve the descriptive power of the model, that sometimes has been accused of missing some key-influencing variables like personality, group interaction or influences over the individual. For instance, the variables related with the self-

expressive behavior model, like: self-efficacy (de Vries et al., 1988; Dzewaltowski et al., 1990), self-identity (Charng, Piliavin, & Callero, 1988; Sparks & Shepherd, 1992; Sparks & Guthrie, 1998; Conner & McMillan, 1999; Conner et al., 1999), and self-congruity (Mannetti, Pierro, & Livi, 2004; Shamah, Mason, Moretti, & Raggiotto, 2017), but also descriptive norms (Sheeran & Orbell, 1999), group norms and group identification (Terry, Hogg, & White, 1999)

Other studies focused on the antecedents of the behavioral intention. Attitude towards the behavior (AB) is historically the most solid and least controversial construct in the TPB, benefiting from years of measurement and operational study beyond the confines of the theory (e.g. Crites, Fabrigar, & Petty, 1994; Olson & Zanna, 1993).

Unlike attitude, subjective norm (SN) was quite discussed within the TPB literature. Scholars have suggested that one reason why the subjective norm construct tends to have a lesser role in the prediction of intentions is that the conceptualization of subjective norm is limited and does not imply other socially defined influences (Conner & Armitage, 1998; Hagger & Chatzisarantis, 2005).

The other controversial issue in TPB theory is measurement and conception of perceived behavioral control (PBC) (Dawson, Gyurcsik, Culos-Reed, & Brawley, 2001). Early work with the TPB identified potential problems with low PBC item internal consistency (Ajzen, 1991; Conner & Armitage, 1998), while more recent research using factor analysis has led to the identification of two distinct item clusters (Trafimow, Sheeran, Conner, & Finlay, 2002 for a review). Ajzen (2002b) has since labeled these two PBC item clusters self-efficacy (ease/difficulty, confidence) and controllability (personal control over behavior). Some empirical studies have found the first one to be more relevant into defining intention and behavior (Trafimow et al., 2002). However, self-efficacy items possess measurement complexity between intention and perceived control and do not measure Ajzen (1991)'s PBC construct as cleanly as controllability items do (Rhodes & Courneya, 2003b, 2004). Moreover, self-efficacy items can be factorially complex with the measurement of intention. It was necessary to fine tune PBC measurement by revisiting the domain representation.

Thus, Rhodes et al. (2006) constructed and compared a multicomponent PBC measure to the traditional PBC measure. Their PBC was modeled starting from three antecedents: perceived skills/ability, opportunity, and resources. Although the multicomponent PBC possessed 71% domain overlap with a traditional measure of PBC, the evidence still suggests that the PBC components are best considered correlated but distinct. Furthermore, when comparing the predictive utility of exercise behavior, the two PBC measures mediated each other. This suggests that the predictive domains of both measures are commensurate.

Indeed, scholars agree that the predictive utility of the model can be augmented by extending it with a number of variables, including moral obligations (Beck & Ajzen, 1991), self-identity (Sparks & Shepherd, 1992), group norms (Terry & Hogg, 1996), belief salience (van der Pligt & de Vries, 1998), group identification (Terry, Hogg, & White, 1999), reactance (Orbell & Hagger, 2006), and factors that capture anticipated emotional experiences following behavioral enactment (e.g. anticipated regret and anticipated affect; Perugini & Bagozzi, 2001; Richard, van der Pligt, & de Vries, 1995, 1996).

2.2. Tattoo Art

There is a rather vast literature concerning tattoos from many scientific points of view. The main contributions come from Sociology, Psychology, Anthropology Gender Studies, Art, History, Paleoforensics, and more recently Marketing and Business research.

In this work is reviewed the portion of material that is functional to the research issue, so the focus is on social sciences, in particular on Sociology, Psychology, Anthropology and Business Studies,

because they are naturally relatable to Consumer Research. Also, they provide the interpretative stimuli we started from, to develop a quantitative perspective on tattoo consumption.

The academic literature concerning tattoos can be approached in different ways, as suggested by Strohecker (2011), Lane (2014) and Wohlrab et al. (2007).

Indeed, tattoos used to be analyzed through the lens of deviance, as an expression of rebellion, often associated with illegal behaviors (Lombroso, 1896; Foster & Hummel; 2000; Stirn et al., 2010; Koch et al., 2010). In the recent years, a new explorative - and nonjudgmental - approach was adopted, and tattoos got considered in the realm of body art, self-expression and as a social and cultural phenomenon to be explored and analyzed.

For instance, in literature we encounter works those deal with the meaning of tattoo, as a subcultural element (Halnon & Cohen, 2006), but also within the consideration of identity and appearance (Atkinsons, 2002; Fisher, 2002; Tiggemann & Golder, 2006). Another interesting evolution of this approach considers tattoo as a fashion (Sweetman, 2000; Kjeldgaard and Bengtsson, 2005), challenging and testing the internal paradox between permanence and fashion influence on tattoo adopters, whereas some authors have engaged this fashion perspective considering tattoo as purchase (Velliquette et al., 1998; Goulding et al., 2004).

Therefore, nowadays the perspective over tattoo adoption is broader and multifaceted, allowing this phenomenon to be explored and tested in many innovative perspectives. For what regards motivation, a study on tattoo adoption (and non-adoption) motivational patterns was done by Pentina and Spears (2011). Their qualitative study collects experiences and interviews among American young adults, and provides a complete framework of tattoo adoption or avoidance, based on categories like uniqueness, rebellion, group identification, ritualization and memorability, religiosity, and so forth.

In addition, tattoos were analyzed in their *artification* process, considering the influence of the fine arts on tattoos and styles development (DeMello, 2000; Schildkrout, 2001; Kosut, 2006, 2013; Hall, 2014).

Finally, there are some works of literature looking at tattoos as a purchase (Sanders, 1989; Sierra et al., 2013). In particular, Sierra et al. (2013) focused on intention (tattoo purchase intention), like the TPB, and analyzed tattoo purchase intention through the lenses of dual process theory, using constructs like self-expression, anticipated regret, emotional response, age, attitude towards art, trust and self-esteem. This work incorporates some of the latest issues and influences towards tattoo adoption, and also develops a model that considers tattoo as the purchase object, shading a light on tattoo consumption and allowing further research to complete these findings.

2.3. *Materialism*

Materialism, commonly considered as an indicator of the importance people give to material possessions (Belk, 1985; Csikszentmihalyi & Rochberg-Halton, 1981; Richins & Dawson, 1992; Micken & Roberts, 1999; Browne & Kaldenberg, 1997; Shrum et al., 2012), is considered in this paper as the moderating variable between the antecedents of the behavioral intention (BI) and the BI itself.

Recent literature is still ambiguous on the influence of materialism over society. For example, Schouten and McAlexander (1995) affirm that consumption is the base of interaction and social cohesion in subcultures of consumption, whereas various studies underline the negative effect of materialism on the perception of well-being (Richins & Dawson, 1992), quality of life (Muncy & Eastman, 1998), sustainability (Norgaard, 1995).

Borrough and Rindfleisch (2002) cast doubts on how to classify materialism. On one hand (Richins & Dawson, 1992; Kasser & Ryan, 1993; Borrough & Rindfleisch, 2002) it can be considered the

value that consumer places over possession, therefore materialism would be considered a value. On the other hand, (Schwartz, 1992) the study of individual values should be considered in the context of the overall individuals' value system, so the question becomes which are the values interacting with materialism, and if this same relationship replicates over different cultures (Kilbourne et al., 2005).

In the case of the present work, materialism is considered in the research model due to its relevant role with respect to consumption, identity and culture (McCracken, 1988; Hetrick, 1989; Schouten & Mc Alexander, 1995; Mick, 1996; Holt, 1997; Micken & Roberts, 1999; Borroughs & Rindfleisch, 2002).

Furthermore, we felt the urge to demonstrate that the construct of materialism doesn't show to have diverse manifestations over different cultural contexts. In fact, despite the odds, materialism was found to be consistent across cultures (particularly in Eastern European countries), replicating dynamics and influences we might witness, for example, in the American culture, which is often taken as a benchmark for capitalism and materialism (Ger and Belk, 1996; Schmuk et al., 2000; Kilbourne et al., 2005; Lerman & Maxwell, 2006; Tobacyk et al., 2009).

Then, although there is not much literature combining materialism with the TPB, some studies have addressed closely related issues: Roets et al. (2006) examined the impact of materialism on attitudes toward racism, finding that while materialism is a strong predictor of racism, its influence is mediated by other motivations, both selfish and collective. Bolton (1979) found a strong relationship between envy (one of the facets of materialism) and several motivators of machismo. Finally, Rose (2007) found materialism to strongly mediate the impact of narcissism on compulsive buying.

Instead, Efrat and Shoham (2013) introduced materialism in their extended TPB model, considering it as a mediating variable between intentions and behavior -in that case regarding aggressive driving-, showing that materialism is suitable to be tested also in other scenarios, because of the implications that materialism have with consumption and appearance. Materialism has been rarely related to tattooing (e.g., Watson, 1998).

3. The empirical study

3.1 Hypotheses development and variables measurement

3.1.1. Attitude towards the behavior

AB it is defined by Ajzen (1991) as "the degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question".

We find the link with the behavioral intention, and consequently with the tattoo exhibiting behavior, in Doss (2005): "In order for a tattoo to be communicative to others, the tattoo would also need to be visible". This leads to the formulation of the following

H1: attitudes towards the behavior have a positive direct effect on the tattooing behavioral intention.

3.1.2. Subjective norm

Ajzen (1991) describes subjective norm as the "perceived social pressure to perform the behavior or not".

One of the most used methods in the group interventions and community-level interventions is that of modeling, a method derived from Social-Cognitive Theory (Bandura, 1986). This theory

explains that people may learn to adopt behavior by observing other people, especially people with whom they identify (Feldman, 1984).

Subjective norm shows to have both a personal and a social dimension. The beliefs of the individual and those of the social group he/she feels to belong to are linked to the individual intention to perform the behavior, in this case getting tattooed and exhibiting tattoos.

Thereby, the following hypothesis is presented:

H2: subjective norm has a positive, direct effect on behavioral intention

3.1.3. *Perceived behavioral control (PBC)*

PBC is considered as “the perceived ease or difficulty to perform the behavior, is assumed to reflect past experience as well as anticipated impediments and obstacles” (Ajzen, 1991).

Following the majority of literature on the topic, we expect a positive effect of PBC on behavioral intentions also in the case of tattooing. In this case, previous experience might, for example, reduce perceived risk for the tattoo consumer (e.g., in terms of sanitary risks, final results, fear of pain, and so forth). Hence:

H3: perceived behavioral control has a positive direct effect on behavioral intention.

3.1.4. *Materialism*

Materialism can be defined as “the importance a consumer attaches to worldly possessions. At the highest levels of materialism, such possessions assume a central place in a person's life and are believed to provide the greatest sources of satisfaction and dissatisfaction” (Belk, 1985).

Materialism is suitable to be included in this model, as a moderating factor between BI and its antecedents, because its use is justified as a moderator and as a key factor in tattoo-displaying behavior (Watson, 1998). Hence:

H4: materialism has a moderating role on all the aforementioned relationships.

3.1.5. *Behavioral intentions and Tattoo exhibiting behavior*

This construct is defined by Ajzen (1991): “Intentions are assumed to capture the motivational factors that influence a behavior; they are indications of how hard people are willing to try, of how much of an effort they are planning to exert, in order to perform the behavior”.

With respect to actual behavior, Ajzen (1991) defines it as “function of compatible intentions and perceptions of behavioral control in that perceived behavioral control is expected to moderate the effect of intention on behavior, such that a favorable intention produces the behavior only when perceived behavioral control is strong”.

We thereby expect a positive relationship between intentions and behavior.

3.2. *Data collection and analysis*

The present study regards data collected at the Iasi International Tattoo Convention in Romania. Only tattooed respondents were considered, both ordinary people and tattoo artists from Romania and Eastern Europe . Data have been collected during the convention, in April 2016.

Accurate cross-translation of the questionnaire has been performed by professional translators and native speakers. 138 usable responses have been collected.

Scales employed in the questionnaire were adopted (and in some cases adapted) from well-known and established measurement instruments in literature. Table 1 shows that the antecedents of intention

are demonstrated to be relevant and reliable, considering several measuring systems. In particular, the Alpha Coefficient (i.e. Cronbach's Alpha) which measures the reliability of a variable in a psychometric test, has a value $>.70$, which stand for a solid reliability, for every construct.

Figure 2. Research model. Source: own elaboration

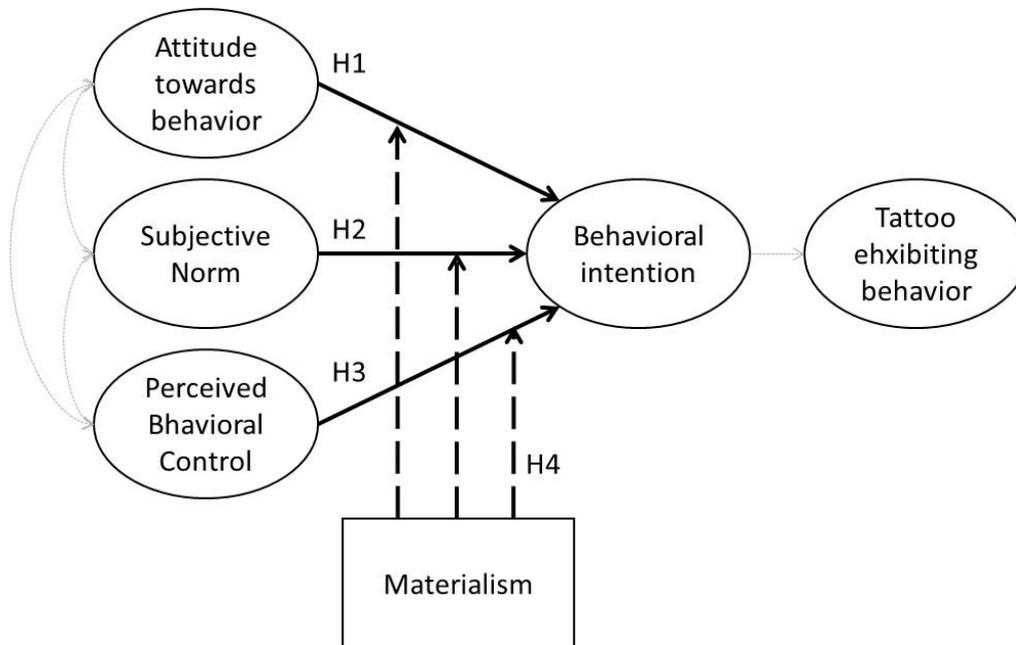


Table 1. Construct and measurement items. Source: own elaboration

Factor labels and statement	Eigenvalues	Percent of variance	Alpha coefficient	Test KMO
Attitude towards the behavior (A _b)	3,65	45.66	0.824	0,857
Subjective Norm (SN)	2.26	56.61	0.716	0.731
Perceived Behavioral Control (PBC)	2.38	59.62	0.750	0.696
Behavioral Intention (BI)	2.33	58.47	0.763	0.766

The regression analysis was conducted in steps: first, the main variables of TPB (i.e., attitude towards behavior, subjective norm, and perceived behavioral control) were entered (Model 1 in Table 2). Then, the moderating variable (i.e., materialism) was entered, to test for main effects (Model 2); finally, the interaction terms (TPB constructs and materialism) was entered as a single block (Model 3).

To test the hypothesized relationships, a Hierarchical Moderated Regression Analyses (HMRA) was performed (as suggested by Cohen and Cohen, 1983).

A hierarchical approach is appropriate to analyze multiplicative terms in a regression analysis or, more generally, to analyze highly correlated independent variables (Bagozzi, 1984; Cohen, 1978; Cohen and Cohen, 1983).

Table 2. Moderate regression

	MODEL 1	MODEL 2	MODEL 3
Main Effects			
Attitude toward the Behavior (A _b)	0.480**	0.478**	0.107
Subjective Norm (SN)	0.280	0.026	0.045
Perceived Behavioral Control (PBC)	0.252**	0.247**	0.148 [†]
Moderator			
Materialism (M)		-0.064 [†]	-0.081*
Interactions			
Attitudes x (M)			0.406**
Subjective Norms x (M)			0.492
Perceived Behavioral Control x (M)			0.089
F	107,235**	81.638**	50.741**
R ²	0.400	0.404	0.426
Adjusted R ²	0.396	0.399	0.417
R ²	0.400	0.004	0.022

Key: ** $p < 0,01$ * $p < 0,05$ [†] $p < 0,10$ (two-tailed)

The validity of this procedure has been widely proven, both in mathematical terms (e.g., Arnold, 1984; Cohen and Cohen, 1983) and in computer simulations (Stone and Hollenbeck, 1984). For each step of the hierarchical analysis, incremental R² and F tests of statistical significance are evaluated (table 2).

An interaction effect is likely to exist only if the interaction term gives a significant contribution over and above the direct effects of the independent variables (Cohen and Cohen, 1983). As shown in table 6, to test the hypotheses, the independent variables were added first (main-effects-only, Model 1); subsequently, the interaction terms (Model 2), and the one-way interaction term (Model 3) were gradually included.

Test for interaction was performed using ModGraph, a MS Excel-based program (Jose, 2008) based on the work of Field (2006) and Aiken and West (1991). Interaction graphs were generated using the mean values and standard deviations of main effects (centered variables), as well as the unstandardized regression coefficients, to confirm the existence of interaction effects (Jose, 2008).

Plots were constructed by plotting different scores of the variables. For this, the ModGraph version for categorical variables (Jose, 2002) was used. Following Aiken and West (1991), simple effects tests were conducted to determine whether the slopes significantly differed from zero.

For each significant interaction, ModGraph was used to generate figures describing significant interaction. These plots are shown in figures 3-5.

Materialism was coded into a dummy variable, which assumed value 1 in the case of materialism scores (the mean of the scores related to materialism in the questionnaire) higher than 5 (in terms of scale points). The dummy variable assumed value 0 in the case of average materialism scores up to 5 (in terms of the scales used in the questionnaire).

Figure 3 shows how attitude is more positively related to behavioral intention in the case of individuals with higher levels of materialism.

Instead, figure 4, shows that a positive relationship is present between subjective norm and behavioral intention, but this relationship appears to be lightly stronger in the case of lower levels of materialism.

Figure 3 shows how perceived behavioral control is positively related to behavioral intentions, especially in the case of higher levels of materialism.

Figure 3. Effect of materialism on the attitude towards the behavior. Source: own elaboration

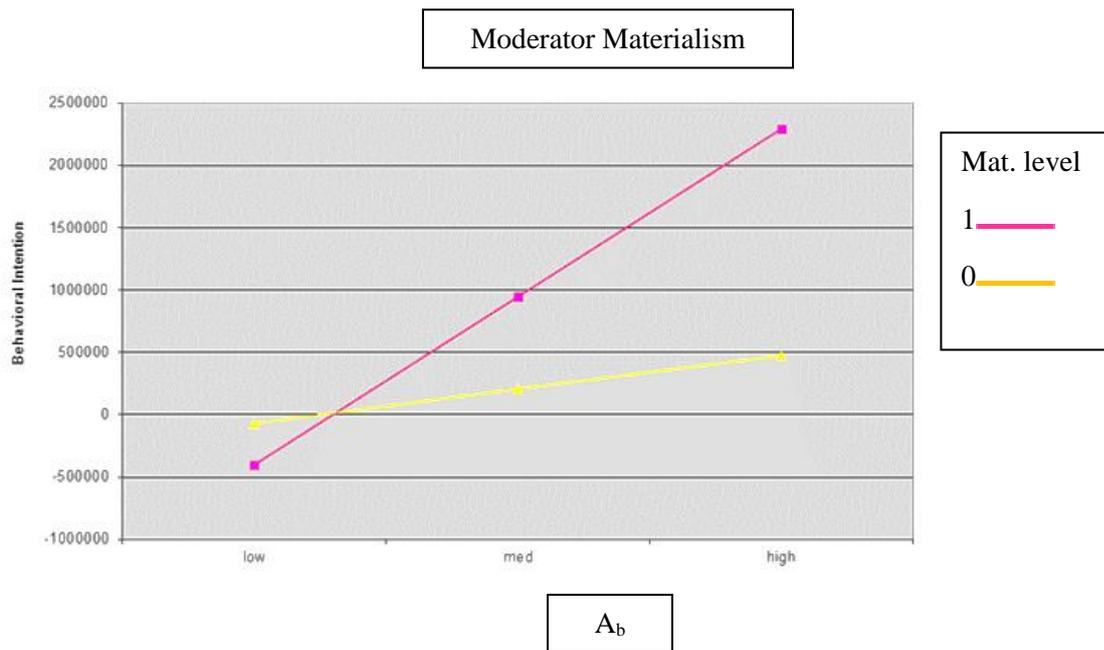


Figure 4. Effect of materialism on the subjective norm. Source: own elaboration

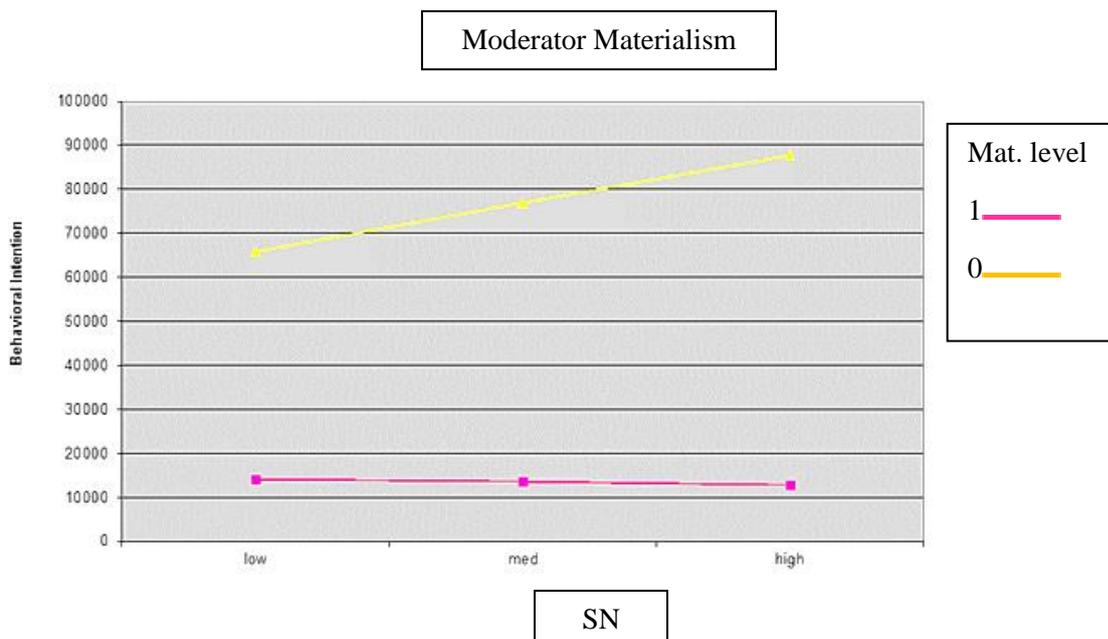
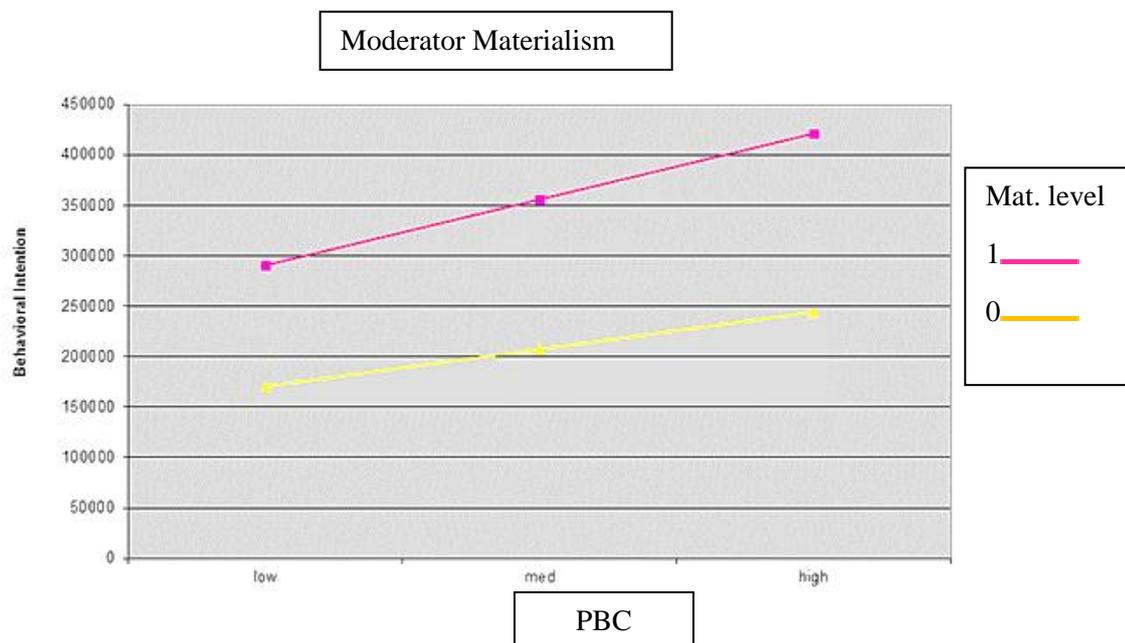


Figure 5. Effect of materialism on the perceived behavioral control. Source: own elaboration



4. Discussion

Our analysis proves first, the consistency of those variables in the definition of the behavioral intention, second, the existence of this linear relation between the predictor variables and the response variable (H1-H3), third, the actual effects of materialism on that relation (H4).

The independent variables set was proved to be consistent in the definition of the dependent one, the behavioral intention. In particular, the Chronbach's Alpha scored high values for each of them, so we are granting the appropriateness of those constructs into defining the behavioral intention, validating the model, but most of all, we are proving the measure of the constructs to be right in terms of item selected in this study.

Hypotheses 1-3 are confirmed, so in Model 1, AB, SN and PBC have individually a linear and positive relation with BI (we compare data directly since the beta in the table are standardized).

In Model 2, the simultaneous interaction of the three variables is confirmed, without significant differences from Model 1, except that the SN is a less strong in defining BI, comparing it with AB and PBC.

Materialism is introduced in Model 3, and we see the effect in the positive results.

In Model 3, the combined effect of the antecedents over the behavioral intention remain positive, like in Model 1-2. However, looking at the slopes (non-standardized beta) in the plots, we notice the relation to be positive with AB and PBC, but with the SN it goes lightly negative. The overall mediated relation of SN with BI seems to be horizontal (figure 4), hence the relation could be inconsistent.

An answer needs to be sought in either the theory and the application: decades of research have revealed general support for the TPB (Ajzen, 1988, 1991; Sheppard, Hartwick & Warshaw, 1988; Terry, Gallois & McCamish, 1993). However, the role of subjective norm in both theories has

revealed to be relatively weak (see Ajzen, 1991; Terry & Hogg, 1996; Terry et al., 1999; Tramow & Finlay, 2002).

Even in a more applicative perspective, some scholars (Rhodes et al., 2006) consider the subjective norm a controversial measurement within the TPB literature. This traditionally measured injunctive norm component has not always produced good behavioral predictions (Armitage & Conner, 2001; Hagger et al., 2002). As a result, some researchers consider subjective norm an unimportant construct, while other researchers suggest that injunctive norm fails to measure subjective norm adequately (Donald & Cooper, 2001).

Furthermore, considering how the item has been constructed and measured in this study, enhancing the social and interactive perspective of the social norm, materialism seems to work on a more personal level, coherently with the definition of personal value (Richins & Dawson, 1992).

However, the subjective norm presents a reduced value of standardized beta in every proposed model, coherently with the cited literature: therefore, its effect over the behavioral intention would be reduced in any case.

5. Conclusions

This study demonstrated the consistency of the TPB in defining intention and behavior in the context of tattoo consumption in the Eastern Europe, adding the materialism as a moderator. Evidences enhance the validity of the model and its constructs, proving that there is an effective relation among the TPB classic construct and the performed intention and behavior.

AB, SN and PBC display a high significance (table 1), and have a positive linear relation with the behavioral intention, enhanced by materialism. The only uncertain result comes from the SN, which has been a debated construct.

In conclusion, on one hand the TPB showed to have an important descriptive power over the tattoo behavioral intention, yet this model is still discussed under a theoretical and applicative perspective, so this analysis could interestingly be supported by other models to interpret tattoo consumption.

On the other hand, the conspicuous literature concerning the TPB has helped us in interpreting results and possible interaction with other personal and social constructs. This popular model formed such a vast stream of literature, that barely any answer can be found, helping this theory to be expanded, applied, and eventually corrected.

With this work, we wanted to stress the explanatory validity of the TPB in an unconventional context, enriching it with the moderating effect of materialism. Data provided positive evidence for all the proposed hypotheses: we can thereby affirm that behavioral intention is jointly, yet not homogeneously, influenced by the three antecedent constructs, and that materialism enhances this linear relation for them all.

This study contributes to research concerning predicting behavior in the field of tattoo consumption, broadening the perspective from the mere view of tattoo purchase.

The model was constructed in coherence with the existing literature, and the hypotheses regarding the role of materialism have been confirmed.

There is definitely room for future perspectives in the tattoo consumption literature. One way could be adopting other theoretical frameworks from consumer research, or analyzing the tattoo market through different lenses (e.g., using tools from strategic analysis). Another possible avenue for future research could be trying to add emerging themes to tattoo consumption, providing an original view on the topic, like the use of social media in tattoo culture, brand identification, group consumption dynamics, or service quality.

References

- Ajzen, I. (1989). Attitude structure and behavior. *Attitude structure and function*, 241-274.
- Ajzen, I. (1991). The theory of planned behavior. *Organizational behavior and human decision processes*, 50(2), 179-211.
- Ajzen, I., & Madden, T. J. (1986). Prediction of goal-directed behavior: Attitudes, intentions, and perceived behavioral control. *Journal of experimental social psychology*, 22(5), 453-474.
- Ajzen, I., Fishbein, M. (1975). Belief, Attitude, Intention and Behavior: An Introduction to Theory and Research. *Addison-Wesley series in social psychology*
- Armitage, C. J., & Conner, M. (2001). Efficacy of the Theory of Planned Behavior: A meta-analytic review, 471-499.
- Atkinson, M. (2002). Pretty in ink: Conformity, resistance, and negotiation in women's tattooing. *Sex Roles*, 47(5-6), 219-235. <http://doi.org/10.1023/A:1021330609522>
- Belk, R., & Belk, R. W. (2015). Materialism: Trait Aspects of Living in a Materialism: Trait Aspects of Living in the Material World, (DECEMBER 1985). <http://doi.org/10.1086/208515>
- Campus, J., & Road, W. (2009). Expanding the Affective and Normative Components of the Theory of Planned Behavior: A Meta-Analysis of Anticipated Affect and Moral Norms, 2985-3019.
- Churchill, S., Jessop, D., & Sparks, P. (2008). Impulsive and/or planned behaviour: Can impulsivity contribute to the predictive utility of the theory of planned behaviour © The British Psychological Society, 631-646. <http://doi.org/10.1348/014466608X284434>
- Conner, M., & Armitage, J. (1998). Extending the Theory of Planned Behavior: A Review and Avenues for Further Research, 1429-1464.
- Dawson, S. (2015). A Consumer Values Orientation for Materialism and Its Measurement: Scale Development and Validation, (October). <http://doi.org/10.1086/209304>
- East, R. (1997). Consumer behaviour: Advances and applications in marketing. *Prentice Hall*.
- Efrat, K., & Shoham, A. (2013). The theory of planned behavior, materialism, and aggressive driving. *Accident Analysis and Prevention*, 59, 459-465. <http://doi.org/10.1016/j.aap.2013.06.023>
- Fishbein, M. (1963). An investigation of the relationship between beliefs about an object and the attitude toward that object. *Human relations*.
- Fisher, J. a. (2002). Tattooing the Body, Marking Culture. *Body & Society*, 8(4), 91-107. <http://doi.org/10.1177/1357034X02008004005>
- Goulding, C., Follett, J., Saren, M., and MacLaren, P. (2004). Process and Meaning in 'Getting a Tattoo', in *Advances in Consumer Research Volume 31*, Pages: 279-284. <http://www.acrwebsite.org/volumes/8897/volumes/v31/NA-31>
- Hagger, M. S., & Chatzisarantis, N. L. (2006). Self-identity and the theory of planned behaviour: Between- and within-participants analyses. *British Journal of Social Psychology*, 45(4), 731-757.
- Halnon, K. B. (2006). Muscles, Motorcycles and Tattoos: Gentrification in a new frontier. *Journal of Consumer Culture*, 6(1), 33-56. <http://doi.org/10.1177/1469540506062721>
- Hooft, E. A. J. Van, Ph, M., Taris, T. W., Flier, H. Van Der, & Blonk, R. W. B. (2005). Bridging the gap between intentions and behavior: Implementation intentions, action control, and procrastination, 66, 238-256. <http://doi.org/10.1016/j.jvb.2004.10.003>
- Kaiser, F. G. (2006). A moral extension of the theory of planned behavior: Norms and anticipated feelings of regret in conservatism, 41, 71-81. <http://doi.org/10.1016/j.paid.2005.11.028>
- Kau Ah Keng, Kwon Jung, Tan Soo Jiuan and Jochen Wirtz (2012). The Influence of Materialistic Inclination on Values, Life Satisfaction and Aspirations: An Empirical Analysis. *Social Indicators Research*, 49(3), 317-333. <http://link.springer.com/article/10.1023/A:1006956602509>
- Kilbourne, W., Gronhagen, M., & Foley, J. (2005). A cross-cultural examination of the relationship between materialism and individual values. *Journal of Economic Psychology*, 26(5), 624-641. <http://doi.org/10.1016/j.joep.2004.12.009>
- Kjeldgaard D., and Bengtsson, A. (2005). Consuming the Fashion Tattoo, in *Advances in Consumer Research Volume 32*, Pages: 172-177. <http://www.acrwebsite.org/volumes/9065/volumes/v32/NA-32>

- Koch, J. R., Roberts, A. E., Armstrong, M. L., & Owen, D. C. (2010). Body art, deviance, and American college students. *Social Science Journal*, 47(1), 151–161. <http://doi.org/10.1016/j.soscij.2009.10.001>
- Kosut, M. (2006). Mad Artists and Tattooed Perverts: Deviant Discourse and the Social Construction of Cultural Categories. *Deviant Behavior*, 27(1), 73–95. <http://doi.org/10.1080/016396290950677>
- Kosut, M. (2013). The Artification of Tattoo: Transformations within a Cultural Field. *Cultural Sociology*, (July), 1–17. <http://doi.org/10.1177/1749975513494877>
- Lane, D. C., (2014). Tat's All Folks: An Analysis of Tattoo Literature, *Sociology Compass* 8/4: 398–410.
- Mannetti, L., Pierro, A., & Livi, S. (2004). Recycling: Planned and self-expressive behaviour. *Journal of environmental psychology*, 24(2), 227-236.
- Manning, M. (2009). The effects of subjective norms on behaviour in the theory of planned behaviour: A meta analysis. *British journal of social psychology*, 48(4), 649-705.
- Mowen, J. C., Minor, M. (1996). Consumer behavior. *Upper Saddle River, NJ: Prentice-Hall*.
- Park, J. K., & John, D. R. (2011). More than meets the eye: The influence of implicit and explicit self-esteem on materialism. *Journal of Consumer Psychology*, 21(1), 73–87. <http://doi.org/10.1016/j.jcps.2010.09.001>
- Patterson, M., & Schroeder, J. (2010). Borderlines: Skin, Tattoos, and Consumer Culture Theory. *Marketing Theory*, 353(0), 1–28. <http://doi.org/10.1177/1470593110373191>
- Pentina, I., & Spears, N. (2011). Reasons behind body art adoption: what motivates young adults to acquire tattoos? *Journal of Customer Behaviour*, 10(1), 73–94. <http://doi.org/10.1362/147539211X570528>
- Rhodes, R. E., Blanchard, C. M., & Matheson, D. H. (2006). A multicomponent model of the theory of planned behaviour. *British journal of health psychology*, 11(1), 119-137.
- Rispoli, M., & Tamma, M. (1992). Goods and services, that is, products. Originally published in *Sinergie Italian Journal of Management*, 29, 95-115.
- Rivardo, M. G., & Keelan, C. M. (2010). Body modifications, sexual activity, and religious practices. *Psychological Reports*, 106(2), 467–474. <http://doi.org/10.2466/pr0.106.2.467-474>
- Sandberg, T., & Conner, M. (2008). Anticipated regret as an additional predictor in the theory of planned behaviour: A meta analysis. *British Journal of Social Psychology*, 47(4), 589-606.
- Sanders, C. R. (1985). Tattoo Consumption: Risk and Regret in the Purchase of a Socially Marginal Service", in - *Advances in Consumer Research Volume 12*, 17-22.
- Schildkrout, E. (2001). Body art as visual language. *Anthro Notes*, 22, 1-8.
- Shamah, R. A., Mason, M. C., Moretti, A., & Raggiotto, F. (2017). Investigating the antecedents of African fast food customers' loyalty: A self-congruity perspective. *Journal of Business Research*.
- Sheppard, B. H., Hartwick, J., & Warshaw, P. R. (1988). The theory of reasoned action: A meta-analysis of past research with recommendations for modifications and future research. *Journal of consumer research*, 15(3), 325-343.
- Shrum, L. J., Wong, N., Arif, F., Chugani, S. K., Gunz, A., Lowrey, T. M., ..., Sundie, J. (2013). Reconceptualizing materialism as identity goal pursuits: Functions, processes, and consequences. *Journal of Business Research*, 66(8), 1179–1185. <http://doi.org/10.1016/j.jbusres.2012.08.010>
- Sierra, J.J., Jillapalli, R.K., Badrinarayanan, V.A. (2013). Determinants of a lasting purchase: The case of the tattoo patron. *Journal of Retailing and Consumer Services* 20, 389–399.
- Solomon, M. R. (1996). Consumer behavior: Buying, having, and being. *Engelwood Cliffs, NJ: Prentice Hall*.
- Stirn, A., Oddo, S., Peregrinova, L., Philipp, S., & Hinz, A. (2011). Motivations for body piercings and tattoos - The role of sexual abuse and the frequency of body modifications. *Psychiatry Research*, 190(2–3), 359–363. <http://doi.org/10.1016/j.psychres.2011.06.001>
- Strohecker, D. P. (2011). Towards a Pro-Social Conception of Contemporary Tattooing: The Psychological Benefits of Body Modification. *The Rutgers Journal of Sociology: Emerging Areas in Sociological Inquiry*, 1, 10–36.
- Terry, D. J., & Hogg, M. A. (1996). Group norms and the attitude-behavior relationship: A role for group identification. *Personality and Social Psychology Bulletin*, 22(8), 776-793.
- Terry, D. J., Gallois, C., & McCamish, M. (Eds.). (1993). *The theory of reasoned action: Its application to AIDS-preventive behavior* (No. 28). Psychology Press.
- Terry, D. J., Hogg, M. A., & White, K. M. (1999). The theory of planned behaviour: self-identity, social identity and group norms. *British journal of social psychology*, 38(3), 225-244.

- Tiggemann, M., & Golder, F. (2006). Tattooing: An expression of uniqueness in the appearance domain. *Body Image*, 3(4), 309–315. <http://doi.org/10.1016/j.bodyim.2006.09.002>
- Tobacyk, J. J., Babin, B. J., Attaway, J. S., Socha, S., Shows, D., & James, K. (2011). Materialism through the eyes of Polish and American consumers. *Journal of Business Research*, 64(9), 944–950. <http://doi.org/10.1016/j.jbusres.2010.11.016>
- Trafimow, D., & Finlay, K. A. (2002). The prediction of attitudes from beliefs and evaluations: The logic of the double negative. *British Journal of Social Psychology*, 41(1), 77-86.
- Velliquette, A. M., Murray, J. B., and Creyer, E. H. (1998). The tattoo renaissance: an ethnographic account of symbolic consumer behavior. *Advances in Consumer Research Volume 25*, 461-467.
- Watson, J. (1998). Why Did You Put That There? Gender, Materialism and Tattoo Consumption. *Advances in Consumer Research Volume 25*, 453-460.
- Wohlrab, S., Stahl, J., & Kappeler, P. M. (2007). Modifying the body: Motivations for getting tattooed and pierced. *Body Image*, 4(1), 87–95. <http://doi.org/10.1016/j.bodyim.2006.12.001>