Digital Natives' intention to interact with social media: Value systems and gender

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<h1 style="text-align:center;color:red;">Digital Natives' Intention to Interact with Social Media:</h1>
<h2 style="text-align:center;">Value Systems and Gender</h2>

ABSTRACT

Social media research focuses predominantly on the link between attitude, behaviour and intention, and rarely takes value systems into account. Values are expected, through intervening variables, to affect intention directly or indirectly. Starting from the Theory of Trying, the aim of this study is to investigate how value systems affect digital natives' intention to interact with social media. By using Fuzzy Set Qualitative Comparative Analysis (fsQCA), an empirical analysis involving data from 116 social media users is carried out to examine how global and domain-specific values, attitude towards trying and gender affect the intention to interact. The results of a configurational analysis show that gender appears to affect many of the configurations leading to the outcome of interest. There are two configurations in which, regardless of gender, global values, domain-specific values and attitude towards trying cause the outcome. The findings indicate that there is no single condition necessary to ensure the outcome, but there are several different configurations of the conditions lead to outcome of interest.

1. Introduction

For the past three decades, the Theory of Planned Behaviour (TPB), developed by Ajzen (1985) as an extension of the Theory of Reasoned Action (Ajzen and Fishbein, 1975), has been the dominant theoretical framework to guide research across such diverse disciplines as entrepreneurial intention (Carsrud and Brännback, 2011), acceptance of new technologies (Tang and Zhang, 2015) or social media and networking (Pelling and White, 2009), to study the link between attitude, behaviour and intention. TRA is developed to predict volitional behaviours as it considers that much of human beings' behaviour in everyday life is under volitional control (Ajzen and Fishbein, 1980; Fishbein and Ajzen, 1975). A widely used extension of TRA, the theory of planned behaviour (TPB), recognizes the limitations of TRA by stating that not all behaviours are under volitional control and suggests that behavioural intention is determined by a person's attitude towards the behaviour in question, subjective norms and a person's perceived behavioural control. Although these theories and frameworks contribute substantially to our understanding of the links between attitude-intention-

behaviour, there is much still to learn about the range (magnitude) of the perception of value or value systems and attitudes intervening during individual's actual behaviour.

According to Kamakura and Novak (1992), value is defined as a single belief that transcends any particular object. Moreover, Wiener (1982) stated that value is more stable within a person's cognitive system and, once established, may act as built-in normative guides to behaviour, independent from the effect of rewards and punishments as consequences of actions (Wiener, 1982). In this paper, we use the definition provided by Rokeach (1973, p. 9) stating that once a value is learned, it becomes part of a value systems in which each value is ordered according to priority relative to the other values. Value system is an important tool, since it is the main tool utilized by individuals for conflict resolution and decision making. Madrigal and Kahle (1994) state that value systems serve to maintain an individual's self-esteem and consistent behaviour in those situations where one or more values may be in conflict. While one might argue that values can be captured through the determinants of TPB, i.e., *the attitude toward behaviour* and *subjective norm*, in this study we are interested in assessing the role of value and how value systems, i.e., personal and social values, direct digital natives' behaviour and play a role in their attitudes towards trying and interacting with social media. Wiener (1988) states that in the literature there are inconsistencies in the distinctions between value and related constructs such as attitude, belief and norm, and argues that social values may be viewed as normative beliefs complementing instrumental belief antecedents of behaviour (Fishbein and Ajzen, 1975). On that account, Kilman, Saxton and Serpa (1985) specify a distinction between the norms and values and view norms as more specific and explicit behavioural expectations that are consistent with value, which are broader.

In addition, another implication of the introduced traditional frameworks conceptualizing behaviour is that they lack comprehensiveness, coherence and flexibility and do not account for nonlinear, dynamic and recursive behaviour (Jacoby, 2012). In essence, literature informs us that the behaviour or decision-making intention of individuals is determined by their attitudes, as a key antecedent of behaviour and behavioural intentions. Furthermore, some authors argue that attitude is a single component or unidimensional concept that is geared towards non-problematic behaviours (Jones et al., 2015). In other words, attitude is conceptualized as a single concept, which implies that individuals develop an overall attitude where the likelihood of success is higher than the likelihood of failure. However, this view has also been criticized by several authors, including Bagozzi and Warshaw (1990), and Xie, Bagozzi and Troye (2008), stating that attitude is indeed, according to the Theory of Trying (TT), a multidimensional concept (Bagozzi, Davis and Warshaw, 1992). Multidimensional conceptualizing of attitude in TT helps us understand the appraisal processes underlying the performance of problematic behaviours, such as intention to interact with social media. Problematic

behaviour, in the eyes of decision-makers can be defined as behaviours that is hindered by internal shortcomings (like a lack of skills) and environmental contingencies (like a poor Internet connection) (Dey et al., 2016).

The theory of trying, developed by Bagozzi and Warshaw (1990) is a conceptualization of goal-oriented behaviour (non-volitional behaviour), as opposed to volitional control behaviour, which reformulates the focal behaviour to include the inability of the decision maker to control outcomes, and adds new formulations of the predictor variables (Bay and Daniel, 2003). The theory of trying further aims to predict the consumer intention to adopt because of the uncertainty of adoption. By using the theory of trying as the backbone of this research, we aim at augmenting this theoretical framework by exploring the role of attitude in explaining digital natives' intention to interact with social media. In this study, digital natives refer to a group within the millennial generation, born after 1990, who have recently entered university and joined the workforce (Williams, Crittenden, Keo and Mccarty, 2012).

While the insights provided by conventional theoretical frameworks are impressive and the alleged benefits have been extolled, we argue that, to gain new insights into how digital natives behave towards interacting with social media, new theories and methods should be employed. In fact, several factors, including personal characteristics (e.g., digital literacy capabilities), attitudes towards technology and behavioural intentions affect the process of interacting with social media. Literature informs us that behavioural intention can be conceptualized with a series of interrelated factors. However, in existing literature has yet to model the interrelationships among these factors and explore their combined effects on digital natives' intention to interact with social media. To address the above-mentioned motivations and fill the gap identified in literature, we use a theory that has rarely been applied in IS research (i.e., Theory of Trying), in combination with a configurational thinking that allows for a more causal understanding than statistical methods. On this basis, the aim of this study is to address the following research question: *what configurations of value systems (i.e., global and domain-specific) and attitude towards trying lead to digital natives' intention to interact with social media.*

Understanding the behaviour of social media users has been an important research direction in recent years, relying on various theoretical foundations and using different research methodologies (Benevenuto, Rodrigues, Cha, and Almeida, 2009; Idemudia, Raisinghani and Samuel-Ojo, 2016). From the perspective of the data utilized, while one can observe an increasing trend of collecting and analysing actual usage and click-stream data (Xie and Lee, 2015), questionnaire-based studies continue to dominate the literature (Bernardo, Marimon and del Mar Alonso-Almeida, 2012; French, Luo and Bose, 2016). The most common approach is to use traditional statistical methods, such as

structural equation modelling (SEM) (e.g., Brännback, Nikou and Bouwman, 2017). As an alternative and complement to statistical thinking, mainly in general business and management literature, recent years have seen a growing interest in the use of configurational methods, in large part motivated by the increasing popularity of Quantitative Comparative Analysis (QCA) (Kourouthanassis, Mikalef, Pappas and Kostagiolas, 2017; Roig-Tierno, Huarng and Ribeiro-Soriano, 2016). Fuzzy-set Qualitative Comparative Analysis (fsQCA), as a generalization of QCA, was introduced by Ragin (1987) and, since its conception, has been widely used to offer a methodological alternative and complement, among other things, conventional regression analysis. Therefore, the aim of this paper, while using the antecedent factors assuming to derive intention, is to employ fsQCA to provide new insights as to how configurations of factors lead to the outcome of interest.

We contribute to the literature by: (i) providing new insights into how value systems affect intention to interact; (ii) identifying the level of agreement between several antecedents' factors and intention to interact, allowing social media managers to develop a better understanding of digital natives' intention; (iii) contributing to IS literature by showing how gender modifies the influence of value perceptions on intention. To the best of our knowledge this is the first study that examines this particular subject within the context of social media and value systems research.

In the next section, we draw on the mainstream behavioural intention antecedent variables from existing attitude-intention-behaviour theories and value systems literature, to build the research model. In section three, the research methodology, data collection and discussion on fsQCA are presented. In section four, descriptive statistics and results of fsQCA analysis are explored and discussed, while section five contains the discussion on the main research findings and, finally, in section six, the theoretical contributions, practical implications, conclusions, limitations and avenues for future research are presented.

2. Literature review

Over the past twenty-five years, the dominating theoretical framework in attitude research, inspired by Ajzen (1985) and Ajzen and Fishbein (1980), has been Theory of Planned Behaviour (TPB). According to Kroenung and Eckhardt (2015), the traditional assumptions and views on the dominant models in attitude-behaviour research, such as TPB, lack a strong predictive power in general. The results of an extensive review of exiting literature and the publications in the top IS journals reveal a strong consensus among scholars that dominant theories tend to focus exclusively on rationality, at the expense of the subconscious influences on people's behaviour, such as values (Sniehotta, Presseau, Araújo-Soares, 2014). Traditional theories, specifically TPB and TRA, neglect the role of emotions beyond the anticipated affective outcome (Conner, Godin, Sheeran and Germain, 2013), which leads

to unrealistic assumptions when analysing digital natives' intention to interact with social media. Moreover, due to the static explanatory nature of the theory, TPB does not sufficiently explain the evidenced effects of behaviour on cognition and future behaviour (Mceachan, Conner, Taylor and Lawton, 2011). Based on the observations outlined above, we start by providing discussion on how value systems affect intention. Then, we provide information about theory of trying, which addresses goal-oriented behaviour, an important but relatively neglected area of individual behaviour. This theoretical approach helps us to better understand the future intentions of individuals based on their past behaviour. Discussions on the concept of Social Media Maven, gender differences, attitude towards trying, and intention to interact with social media are also provided in this section.

2.1. Domain-specific values and Global values

Based on Rokeach (1973, p.5), the concept of value is defined as "an enduring belief that a specific mode of conduct or end state of existence is personally or socially preferable to an opposite or converse mode of conduct or end-state of existence". Values are enduring beliefs that function as guiding principles in people's lives that enable personal or social preferential judgment over different modes of conduct (Homer and Kahle, 1988; Kamakura and Novak; 1992; Rokeach, 1973; Xie et al., 2008). Values make up a system of values that are personal as well as social. Personal values are important bases of attitudes and are assumed to influence behaviour directly or indirectly, through intervening variables such as attitude. In fact, values can be expected to be determinants of attitudes and behaviour (Homer and Kahle, 1988). More specifically, to understand how values direct attitude and behaviour, the distinction between values related to specific occurrences and situations (i.e., domain-specific values) and global values requires closer consideration. The distinction is important because domain-specific values express people's perceptions of a given domain and will be determined by global values and people's appraisal of the domain's ability to provide such values.

Moreover, global values are assumed to be independent of concrete objects and considered to be more stable and permanent, whereas domain-specific values are related to the consequences (benefits) of using a product or service, or to a particular action, and are less stable than global values (Van Raaij and Verhallen, 1994). In other words, global values reflect the most enduring and strongly held beliefs of a person, whereas the domain-specific values reflect values that apply to a particular context or area of activities, and may change behaviour directly, while global values do not specify what activities (domains) a person considers desirable and, therefore, appear to affect behaviour indirectly. Consistent with the conceptualization of attitude as a multidimensional concept, we posit that people may agree on values on a general level, but they may not be able to agree on how those values work out for a specific domain or activity (in this study, social media interaction). Thus, the

roles that domain-specific and global values play and how individuals form their overall behaviour and intention to interact with social medial require further investigations.

2.2. Theory of Trying

The Theory of Trying (TT), an extension of the theory of goal pursuit and theory of planned behaviour, has so far attracted little attention in IS research (Bagozzi and Warshaw, 1990). On the one hand, TT informs us that people's attitudes towards the adoption of technological innovations is a function of three sub-attitudes: (i) attitudes toward success, (ii) attitudes toward failure and (iii) attitudes toward learning to use the technology. On the other hand, the theory of trying is a process-based conceptualization of goal-oriented behaviour. Behaviour, according to TT, is not treated as a terminal goal but as a means to achieving more fundamental goals. That is to say, a terminal goal ends the process, whereas, with respect to trying, behaviour is an activity undertaken as a conduit to achieving a final goal. In this study, fundamental goals refer to enduring objectives and goals that can be achieved through a process. To elaborate further, we provide the following example. A person is skilled in using social media and knows exactly how to access the Internet (volitional control), but fails to retrieve the necessary information when ads or other interesting links suddenly appear and distract even the most skilled user (non-volitional), who then fails to complete the original intended behaviour. Mathur (1998) argues that intention reflects a state of mind of an individual and drives that individual to take action, as opposed to trying, and consequently reflects action or even some parts of the actual behaviour.

2.3. Attitude towards Trying

In TT, trying is seen as a possible mediating variable between behavioural intention and actual continued usage. To support this observation, Bagozzi and Warshaw (1990) argue that, while testing and validating the TPB, Ajzen (1985) neither addressed trying nor included measures of belief, expectation of success and failure, or attitude toward success and failure. In addition, according to the authors, neither the theory of goal pursuit (TGP) nor the theory of planned behaviour (TPB) explicitly accounts for the influence of past trying on future trying. However, earlier studies have shown that past behaviour adds independent predictiveness over attitude and social norms in the determination of behavioural intention (Bagozzi, 1981). Furthermore, Wttenbraker, Gibbs and Kahle (1983), found an additional direct effect of past behaviour on future behaviour over and above the effect of intention alone. Since the subjects in this study are digital natives and have been surrounded by the latest technological innovations and Internet has always been part of their lives, one could be argued that they do not necessarily need to try to learn how to interact with the new social media applications. However, we argue that their attitudes towards trying to learn new technologies and social media

applications and the way their intention to interact with the applications in question is formed, to a large extent depend on their past trying of similar applications, as well as their past successes or failures in relation to the customization and personalization of these types of applications. Multidimensionality of attitude provides insight into how digital natives form their behaviour and intention to interact with social media.

To further support our reasoning regarding the relevance of attitude towards trying as a potential factor to explain digital natives' social media behaviour, we refer to the Diffusion of Innovation theory (Rogers, 1962) and Effectuation (Sarasvathy, 2009). Rogers (1962) defines trialability as the degree to which an innovation may be experimented with in a limited basis. Furthermore, Rogers claims that personal experimentation with an innovation is one way for an individual to give meaning to that innovation and to find out how it works under their own conditions (e.g., trying out and mastering different social media applications). Without a doubt, a related concept within Information Systems is bricolage (Ciborra, 1994; Verjans, 2005), which captures the notion of trying or "tinkering or improvising". While tinkering refers to amateurish behaviour, one can argue that non-volitional behaviour can sometimes make a skilled person amateurish.

2.4. Social Media Maven

Social median maven is defined as an individual who possess identifiable traits and behaviours, and also encouraging and informing others about social media (Lester, Tudor, Loyd and Mitchell, 2012). Moreover, Walsh, Gwinner and Swanson (2004) state that the motivational aspects of maven behaviour can be defined as an obligation or need to assist others by sharing information. In this study, we argue that to identify individuals who can be recognized as potential social media mavens, we need to go beyond the mere investigation of usage of social media towards identifying individuals who are willing to communicate with others about social media, both in the form of recommending and encouraging the usage of social media (Lester et al., 2012).

To elaborate this further, we argue that the peers of university students may exert a stronger normative pressure on fellow university students than family and sometimes even close friends. In this study, SMM measures people's perception of how others (family member, university peers and friends) may consider their ability to carry out certain domain-specific tasks, when they are assumed to possess expert skills when compared to others (Belch, Krentler and Willis-Flurry, 2005; Feick and Price, 1987). SMM is similar to market maven, which refers to an individual who has deep knowledge and information about various types of products or services, and is willing to provide and share general marketplace information with others. In a social media context, an expert and knowledgeable user is expected to provide and share information to her or his friends and peers. In previous studies, family

and friends were mentioned together (Feick and Price, 1987). However, in this study, we deliberately treat family and friends separately, because there are distinct differences between the influence of family and friends on digital natives who are assumed to be significantly more skilful users of social media than, for instance, their parents (Lester et al., 2012).

2.5. The role of gender in social media use

Ahuja and Thatcher (2005) indicate that gender plays an important role, specifically in the use of social media and the Internet. Furthermore, some studies show that males and females differ considerably in how they use the Internet. For example, Duggan and Brenner (2013) argue that young adults, in particular 18-29 years old, are the most likely of any demographic group to use social networking sites and that women are more likely than men to be on these sites, and in particular Facebook. Moreover, Odell, Korgen, Schumacher and Delucchi (2000) examine the role of family income, parental education or type of college on Internet usage, and conclude that these factors affect the way female college students use the Internet. In this study, we aim to assess the role of gender and our focus is explicitly on investigating how gender of digital natives impacts the configurations of conditions leading to the outcome of interest (i.e., intention to interact with social media). The impact of gender differences on the perception of values has been analysed by Wang (2010), who found that hedonic values affect male users differently than females when they look for information on the Internet. A study by Lyons et al. (2005), found that differences in values are gender-related and generational. That is to say, gender and generation are important attributes when studying values. In a similar vein, in this research, we examine in particular the perception of domain-specific values and global values among the female and male subjects within a specific generation, to determine whether new knowledge can be derived from the analysis and leads to a wider understanding of the phenomena involved.

2.6. Intention to interact with social media

It has been argued that digital natives, also known as "Generation Y", express preference for the use of social over traditional media not only in personal, but also in professional environment, such as at universities (Verčič and Verčič, 2013). Digital natives are considered to be heavy users of social media, and the Internet has always been part of their lives, while social media has affected their personal values more than any other group in society. In this study, we argue that digital natives' intention to interact with social media proceeds under the explicit acknowledgment that the results may be affected by the actions of others or circumstances beyond their control (non-volitional behaviour). It is also important to mention that we are aware of the fact that adoption of social media has network effects, so that if one's friends are using them, one would also be more likely to use them. But, in the

Based on the discussion presented above, we can formulate the following research propositions, to be investigated throughout the rest of the research:

Proposition 1: *Attitude towards trying, global values, domain-specific values, social media maven and gender affect people's intention to interact with social media.*

Proposition 2: *The gender of the digital natives influences their motivation for the intention to interact with social media.*

3. Research methodology

For more than three decades, the dominant quantitative approaches in business and Information Systems research have been rooted in mathematical statistics, particularly different variants of regression analysis. While these methods can provide essential insights, they have some limitations that makes it necessary to use other methods to complement or replace the widely used conventional regression-based methods, such as multiple regression analysis, covariance-base structural equation modelling (SEM) or partial least squares SEM(PLS-SEM). The most widely mentioned limitations stem from the fact that most of the conventional approaches have a tendency to assume a symmetric relationship between the variables included in a model (Woodside, 2013). What has perhaps received insufficient attention thus far and remains relatively untested is: "*how variables combine to cause a certain outcome*" (Ragin, 2000) or how to account for the asymmetric relationships between a set of antecedent variables and the outcome variable. Fuzzy-set Qualitative Comparative Analysis (fsQCA) introduced by Ragin (2008, 2014) and, since its conception, has been widely used to overcome the pitfalls of conventional regression analysis and other approaches. Within the context of social media, configurational thinking, and specifically fsQCA, has so far gained little attention. In one of the few contributions, Gunawan and Huarng (2015) use both Structural Equation Modelling (SEM) and fsQCA to analyse the viral effects of social network media on consumers' purchase intention. They point out the two distinct types of insights to be gained by the two methodologies they apply: (i) assessing the relationship between the attributes describing the phenomenon using SEM, and (ii) assessing the causal connections among the attributes using fsQCA. In this research, we use fsQCA to provide a novel understanding of user behaviour in relation to social media. In the following, we will start by recalling the main steps of performing configuration analysis with fsQCA and continue with describing the data used in the analysis.

3.1. Fuzzy set qualitative comparative analysis

Qualitative comparative analysis builds on fuzzy set theory and makes it possible to model how causal conditions contribute to an outcome (EL Sawy, Malhotra, Park and Pavlou, 2010; Fiss, 2007; Woodside, 2013). While conventional statistical methods, such as regression analysis, assume that individual attributes influence a particular outcome, the core theoretical assumption of QCA states that the influence of particular attributes on a certain outcome depends on how combinations of the attributes cause the outcome. This is a typical feature reflective of various applications of fuzzy sets over other mathematical tools (Shojaiemehr and Rafsanjani, 2016). In fsQCA, a generalization of the original QCA procedure, a gradual representation is specified to capture various levels of interactions of attribute variables, resulting in different levels of the outcome variables (Ragin, 2008). While this extension inherits the essential properties of the original QCA methodology, it is more appropriate for capturing casual relationships among multi-valued, rather than not only binary, measurements. From a different perspective, it is important to note that the original intention behind introducing QCA was to develop a methodology that can be applied to datasets that: (i) are not sufficiently large for complex statistical analysis; and (ii) do not contain information about observations that is appropriate for a qualitative analysis (Fiss, 2007). The dataset used in this research, with 116 usable data points, fits this characterization and offers a sufficient basis for obtaining theoretically relevant results.

The first step of utilizing fsQCA is the calibration of variables: transforming variables into fuzzy sets. This is usually done by specifying three values from the original range of the variable corresponding to full membership (1), full non-membership (0) and cross-over point (0.5). The magnitude of the transformed values reflects the extent to which the observation can be seen as reflecting the attribute quantified in the specific variable. In our analysis, because we used Likert scale with seven levels, 7, 4, and 1 correspond to full membership, crossover value and full non-membership, and the intermediate values are assigned a membership using linear transformation. In case of a binary variable like gender, there is no need to specify cross-over value; one of the classes will be assigned to full membership, while the other class represents full non-membership.

After we converted all variables into a fuzzy condition set, in the next step, all possible variable combinations should be assessed. In this method, a combination refers to a set-theoretic union of either the original sets or their complements. This means that, with k conditions, there will be 2^k possible combinations to be evaluated. After the most frequent combinations are identified, they are evaluated to narrow down the analysis to the ones that are consistent (in a fuzzy logic sense) with the statement "the combination leads to the outcome" (Ragin, 2000). To reduce the truth table, we can set the frequency cut-off value (i.e., minimum number of cases in the rows). Ragin (2008) has suggested, in addition to zero, to remove configurations that only consist 1 and 2 cases. If no frequency cut-off value is defined, only rows with zero cases will be removed from the truth table. Additionally,

for the remaining rows, we need to define a minimum acceptable level of consistency. This will help us to classify configurations as either sufficient or not sufficient for the outcome of interest or the degree to which a specified configuration shows the desired outcome. The minimum cut-off value for consistency is suggested to be at 0.75 (Ragin, 2006, 2008; Woodside, 2013). Next, based on Boolean algebra, the Quine-McCluskey algorithm can be used to reduce the truth table rows into simplified solutions. By applying this technique, three different set of solutions can be obtained, (complex, parsimonious and intermediate). The set of complex solutions can be achieved by taking the logical union of sufficient combinations which were identified in the previous step. In other words, complex solution presents all the possible combinations of conditions when traditional logical operations are applied. Additionally, to this set of general solutions, complex solutions can be simplified into: (i) parsimonious solution, which is simplified version of the complex solution and present the most important conditions which cannot be left out from any solution, and (ii) intermediate solutions, by applying counterfactual analysis on the complex and parsimonious solutions. Moreover, intermediate solutions require the specification of simplifying assumptions that are applied given that the researcher's substantive and theoretical knowledge are incorporated in the solution (Ragin, 2009). In case one does not make any assumptions in the specification of intermediate solutions, they coincide with the complex solutions.

As pointed out, for example by Fiss (2007), the use of intermediate solutions is recommended, as parsimonious solutions tend to offer an oversimplified view of the phenomenon under study. Moreover, Ragin (2008, p. 135) argue that intermediate solutions are superior to both the complex and parsimonious solutions, and recommended to use intermediate solution when interpreting the fsQCA results. With regard to the role of individual conditions within a configuration, according to Fiss (2011), they can be divided into core and peripheral conditions. If the conditions are in both the parsimonious and intermediate solutions, we refer to them as core conditions. Peripheral conditions account for conditions that are present only in the intermediate solutions.

3.2. Measurement of the variables

An extensive search among top-ranked IS journals, marketing, consumer research and personality and social psychology was used to generate a comprehensive list of measures. All survey items for each construct in this research are adopted from previously validated measurements (Bagozzi and Edwards, 1998; Belch, Krentler and Willis-Flurry, 2005; Homer and Kahle, 1988). When it was necessary, slight modifications were made to the items to fit the research context. For example, to measure the attitude towards trying to interact with social media, we used established measures from the theory of trying (Bagozzi and Warshaw, 1990). The items within this construct focus on goal-oriented

behaviour from the theory of Goal Pursuit (TGP) (Bagozzi, 1988). Moreover, to measure social media maven, we used items from market maven developed by (Feick and Price, 1987) and modified them to be applied in the context of the Internet (Belch, Krentler and Willis-Flurry, 2000). The market maven scale measures a person's tendency to be a general provider of many types of market information to others. For example, in our research, we use an item called 'My friends think of me as a good source of information from the Internet'. To measure the domain-specific and global values, a list of values (LOV) was adopted from (Kahle, 1983; Veroff, Douvan and Kulka, 1981). Appendix C shows the question items that were used to measure the variables. All the items were measured on seven-point Likert scale, ranging from "strongly disagree (1)" to "strongly agree (7)" or "unpleasant (1)" to "pleasant (7)".

3.3. Data collection

A self-explanatory paper-based questionnaire was used to collect the data. The questionnaire was pretested on a randomly selected sample of social media users to check for ambiguous expressions. We only invited students who use social media applications on a daily basis to form a homogeneous sample. This sampling strategy enables us to investigate the users' interaction with social media and see how skilled users are willing to share information and interact with peers and friends. Moreover, it also enables us to understand whether the magnitude of the usage of such services allows users to be recognized as social media mavens. Compeau, Marcolin, Kelley and Higgins, (2012) and Lu, Lin, Hsiao and Cheng (2010), argue that students most likely are active smartphone and social media users. Ashraf and Merunka (2016), argue that using student samples provides scholars with the opportunity to embrace the debate and explicitly test for differences and initial theory testing and the outcome makes it possible to establish a pool of findings that can be relied upon more conclusively. Additionally, Duggan and Brenner (2013), argue that young adults are more likely to use major social media applications than others. In light of these observations, we argue that using the university students as a sample for data collection is an appropriate approach when the aim is to understand digital natives' preferences and behaviour. Previous studies have also shown that it may be reasonable to utilize and employ students as subjects when the phenomenon under investigation is not one that crystallizes over time, for example the effect of social norms (Agarwal and Karahanna, 2000). The population of this study consists of social media users. We distributed the questionnaire among 142 post-graduate students in March 2014 at one of the universities in Finland. Within two weeks, we collected a total of 116 usable responses. In addition to general questions, such as which social media respondents are currently using and which social media they most preferred, several relevant questions regarding the relationship between value-attitude-behaviour link and interactive behaviour with social media were also included.

4. Data Analysis and Results

In the following section, we start by discussing the data on a descriptive level, focusing on the demographic variables, after which we present the results of the fsQCA analysis.

4.1. Descriptive statistics

Out of 116 valid and complete responses, 55 (47.4%) are female and 61 (52.6%) male. The age of respondents varies between 19 and 37 years old, and the average age 22.09. It should be noted that only 4 of the respondents participated in this study are above 27 years old, so we can assume that our sample represents the digital native cohort. The analysis reveals that the most preferred social media platforms among the respondents are Facebook (59.5%) and WhatsApp (28.4%), respectively. The least preferred social media platforms are Blogs and YouTube, accounting for 1.7% of the use in both cases.

The number of respondents who possess a smartphone account for 98.3%, while 30.2% of the respondents indicate that they access the social media platforms via their mobile devices on a regular basis. Only 10.3% of the participants indicate that they access social media via tablets as well. In addition to the fact that almost every subject owns a smartphone, technology usage among them is also relatively high. For example, 109 of the respondents (94%) own a laptop, 43.1% use Internet TV and 87.1% are constantly connected to the Internet. For more information about the items and descriptive analysis, see Appendix A. The convergent validity and discriminant validity were computed to examine the adequacy of the measurement model. In addition to these tests, Cronbach's Alpha was computed to test the reliability of the data. The recommend threshold for (α) is 0.70, and the results show that (α) values are all above the recommended threshold, indicating that the measures have all the acceptable reliability. Moreover, the reliability was assessed using composite reliability test, and the results show that all the CR values (ranged from 0.729 to 0.842) are above the recommended value of 0.7 (Bagozzi and Edwards, 1998), see Appendix B.

4.2. Results of fsQCA analysis

Given the description presented above that informs how to proceed with the fsQCA analysis, we perform the analysis in two steps. In the first step, we do not include gender of the respondents in the fsQCA. The presence of global values, domain-specific values, attitude towards trying should be associated with the presence of intention to interact with social media. In the second step, we include gender as a condition in the analysis. Every step in the analysis was performed using the R statistical software, using the packages "QCA" and "QCAGUI" (Dusa, 2007).

Table 1

Checking the necessity of causal conditions.

Condition	Consistency	Coverage
Gender	0.540(0.460)	0.763(0.722)
Domain-specific values	0.556(0.728)	0.996(0.926)
Global values	0.891(0.391)	0.937(0.990)
Social media maven	0.776(0.498)	0.964(0.922)
Attitude towards trying	0.988(0.336)	0.990(0.964)

As the initial step of the analysis, we check whether any of the conditions are necessary for the outcome to occur (Ragin, 2006). When a condition is found necessary, it implies that the membership of being in the outcome is generally speaking smaller than the membership of the condition, meaning that the outcome can only occur if the condition is met. The strength of this type of relationship can be assessed using consistency and coverage measures. Consistency captures the behaviour described above, with values higher than 0.9 indicating important relationships (Schneider and Wagemann, 2007). Coverage captures the importance of the relationship: the lower the coverage, the smaller is the number of cases to which the identified relationship applies. Table 1 shows the results of necessity analysis. As the results indicate, while none of the conditions has a consistency value higher than 0.9, attitude towards trying can be identified as an important condition, which in most of the cases is required for a person to have the intention to interact. It is important, however, to note that this result does not infer the sufficiency of this condition, i.e., high attitude does not guarantee high intention. This issue become clear when we perform the main part of fsQCA analysis, which is the sufficiency analysis. In the first step of the analysis, the goal is to identify the causal configurations of the four conditions "Global values" (GV), "Domain-specific values" (DV), "Attitude towards trying" (ATT), and "Social Media Maven" (SMM) leading to the outcome of interest "intention to interact". We use the following notations to report the fsQCA results: blank circles (○) indicate the absent of a condition, and black circles (●) indicate the presence of a condition, and blank spaces indicate "*do not care*" in other words, the causal condition may be either absent or present (Ragin and Fiss, 2008). Moreover, large circles indicate core conditions and small circles show peripheral conditions. When selecting the configurations, the cut-off for frequency was specified as 1, while the consistency threshold was specified as 0.95.

Table 2 shows the five identified intermediate solutions, with the corresponding consistency and coverage values. The overall solution coverage is 0.837, with a consistency of 0.931. These values show that the identified configurations capture a large number of cases (coverage value) with a high level of consistency. Figure 1 shows the relationship between the five solutions and intention; points above the diagonal line represent observations consistent with the specific solution. As shown, the five solutions are highly consistent with the outcome "intention to interact".

Solutions one and two both include SMM, showing the overall importance of this condition; in both solutions, SMM is a core condition. While SMM alone is not sufficient to ensure the outcome, when combined with either the presence of ATT (solution 1) or the lack (negation) of DV (solution 2), the resulting configurations are strongly consistent with the presence of intention to interact. Solution three characterizes different types of users, for whom the synchronous presence of values (both domain-specific and global) and presence of attitude towards trying ensures high intention, in this solution, domain-specific values is a core condition.

Table 2

Intermediate solution: without gender.

Solution	GV	DV	ATT	SMM	Raw Coverage	Unique Coverage	Consistency
1			●	●	0.779	0.048	0.946
2		○		●	0.666	0.006	0.955
3	●	●	●		0.588	0.029	0.977
4	●	○	○		0.355	0.000	0.964
5	○	○	●		0.413	0.009	0.976

Note: GV = global values; DV = domain-specific values; ATT = attitude towards trying; SMM= social media maven

Solution 4 shows a configuration in which the presence of global values in addition to the absence of domain values and attitude towards trying lead to the outcome of interest. In this configuration, the absence of attitude towards trying is a core condition. Interestingly, solution five shows a configuration in which attitude towards trying plays an important role. In this solution, the presence of attitude towards trying together with the absence of both global and domain values lead to the outcome of interest. In this solution, the negation of global value is a core condition.
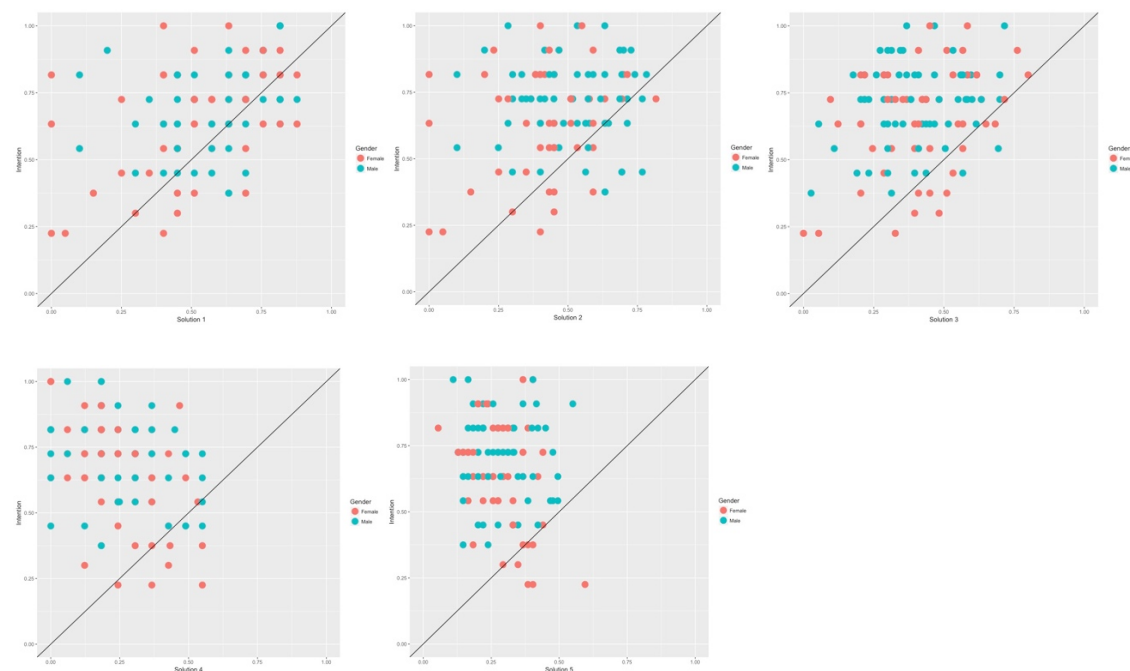
Fig. 1. Intermediate solutions without "gender" as a causal condition.

As all these rules have high coverage values, the results support our initial assumptions regarding the relevance of value-based thinking and the use theory of trying as potential theoretical framework to explain digital natives' (regardless of their gender) intentions to interact with social media. From coverage value perspective, the first solution has the highest coverage value (0.779), indicating that this solution covers approximately 79% of the cases.

In the second step, we include gender as a causal condition additionally to the four conditions considered above. We use the following notations for showing the gender in the solutions in Table 3: (○) for females and (●) for males. When selecting the configurations, the cut-off for frequency was specified as 1, while the consistency threshold was specified as 0.91. The fsQCA results are shown in Table 3, with an overall solution consistency of 0.919 and a coverage of 0.871. Figure 2 clearly shows the differences with respect to gender, and the seven solutions in this case are also highly consistent with the outcome of interest. The first and most important configuration is Solution one, which is the same as solution three in the previous step. This is one of the configuration that does not depend on the gender of the respondents, and has the second highest coverage value (0.588) among all solutions in Table 3. This result offers a very strong support in favour of considering the theory of trying and value-based thinking in explaining digital natives' intention to interact with social media. This solution implies that the synchronous presence of values (both domain-specific and global) and presence attitude towards trying ensures high intention, regardless of the gender of the subjects, are sufficient conditions for the occurrence of the outcome, in this solution both the presence of domain-values and presence of global values are core conditions. From consistency value standpoint, Solution one has the second highest value (0.977). As mentioned, when the gender is considered as a condition in the fsQCA analysis, we obtained interesting results that highlight the role that gender plays and supporting our second proposition. Moreover, although the gender of the subjects plays an important role in five configurations (see Table 3). Solution one and seven does not involve gender as a condition and they reflect the behaviour of a large part of both female and male users. As such, we can observe that the other four solutions from the previous analysis are no longer present in their original form, indicating that, for those solutions, the gender of the respondent does make a difference: in turn, this implies that analysis without including gender as a condition did not provide a complete picture. The fsQCA analysis reveals that there are three solutions that are dominated by the males (solutions 2-4) and two solutions dominated by the females (solutions 5-6). For instance, solution two indicates that for males in this configuration, the presence of SMM and the absence of domain-specific values lead to the outcome. In solution three, we can observe that for males, the presence of global-values and ATT are important conditions to lead their intentions to interact with social media and the presence of global values is a core condition in this solution. However, we see a different configuration in solution

four, the presence of ATT and the presence of SMM lead the outcome of interest for males within this solution, and SMM is a core condition in this solution. When we assess solutions dominated by the females, one can observe interesting results. For instance, solution five shows a configuration in which the presence of global values, in addition to the absence (negation) of domain-specific values and the absence of attitude towards trying lead the intention of the females to interact with social media. In this solution, the absence of ATT is a core condition. In solution six, the absence of both values (i.e., global and domain-specific) and the presence of ATT and absence of SMM lead to the outcome of interest. In this solution, the absence of global values is a core condition. In solution seven, we can observe that the presence of global-values, presence of ATT and presence of SMM lead to the outcome and this solution is applicable to all regardless of their gender. Interestingly, this solution has the highest coverage value (0.755) indicating that this solution covers nearly 76% of the cases. All in all, solutions in Tables 3 indicate that gender as a condition plays an important role and that for males the presence of attitude towards trying and social media maven are considered important conditions.

In the case of males, what we can clearly see is that, domain-specific value is not important, in fact the absence (negation) of DV values in one configuration (solution 2) leads to the outcome of interest, and in other two solutions (solution three and four) has not been appeared at all, in other words, the causal condition may be either absent or present (Ragin and Fiss, 2008). In the case of females, additionally to solution one and seven discussed above, the absence of domain-specific value is important condition to ensure intention to interact with social media. Still, as one can observe, while, for females there are two configurations (solution five and six) that lead to the outcome of interest, in the case of males, there is a wider variety of configurations describing their intentions to interact with social media.

Table 3
Intermediate solution: gender included.

Solution	GEN	GV	DV	ATT	SMM	Raw Coverage	Unique Coverage	Consistency
1		●	●	●		0.588	0.019	0.977
2	●		○		●	0.372	0.002	0.948
3	●	●		●		0.472	0.042	0.935
4	●			●	●	0.436	0.014	0.951
5	○	●	○	○		0.159	0.000	0.937
6	○	○	○	●	○	0.166	0.002	0.983
7		●		●	●	0.755	0.011	0.955

Note: GEN = gender; GV = global values; DV = domain-specific values; ATT = attitude towards trying; SMM= social media maven

Moreover, the fsQCA results show that the presence or absence of domain-specific values, ATT and SMM are the dominant conditions in most of the configurations when gender as a condition is included in the analysis. Therefore, we conclude that there are multiple routes that may predict the digital
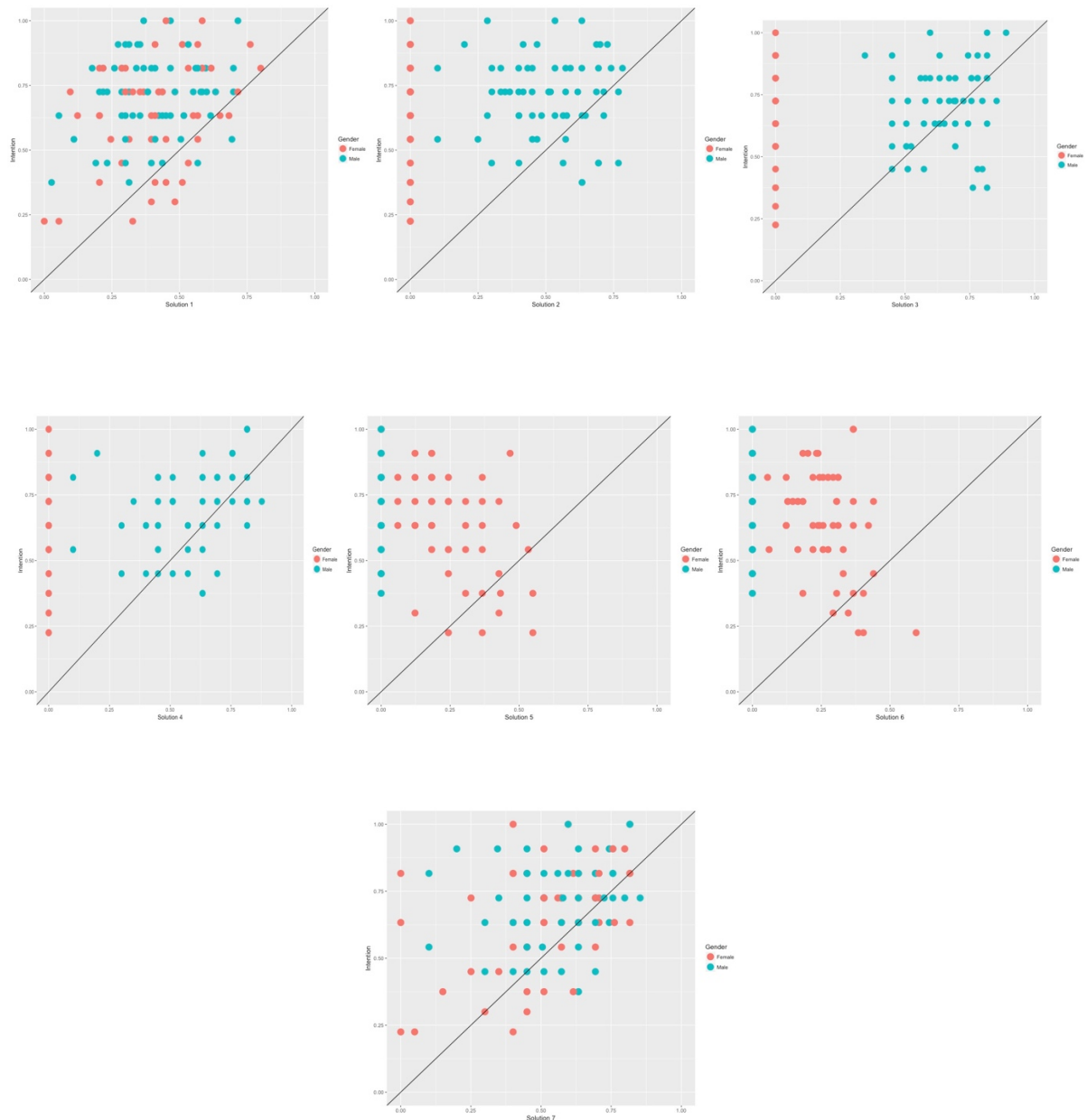
Fig. 2. Intermediate solutions with "gender" as a causal condition.

5. Discussion

This research demonstrates the potential of applying configurational thinking to social media research. Most importantly, we demonstrate the presence of equifinality by identifying various configurations of causal conditions leading to intention to interact with social media. Particularly, we show that there is no single condition that is necessary to ensure the outcome (i.e., intention to interact with social media), but instead, different combinations of conditions (presence or absence of them) lead to the outcome of interest. This is further justified and shown in the results obtained from fsQCA analysis (see Table 2 and 3). When the gender of the respondents is included in the analysis,

there are two configurations in which gender does not influence the outcome (see Table 3). The results reveal that, for females, enduring, strongly held beliefs and more stable (global) values are more important to ensure the outcome, compared to values that are less stable and change over time or reflect a particular area of activities (domain-specific). In fact, the absence (negation) of domain-specific values impact greatly the intentions of females to interact with social media (see Table 3, solutions 5 and 6). Moreover, consistent with the findings by Richard, Chebat, Yang and Putrevu (2010) that show that gender differences could influence how women and men obtain and process online information, the results of the fsQCA analysis show the importance of this condition in our research. In other words, the results indicate that there are certain conditions (attributes) that affect the decision of digital natives to interact with social media. This is supported by the fsQCA results showing that different combinations of conditions (attributes) impact males and females' intentions. This is consistent with the findings of Lester et al. (2012), showing that females are more likely to engage in maven behaviours regarding to both social networking and multimedia messaging. Richard et al. (2010) also show the importance of gender and argue that the influence of skills on exploratory behaviour is likely to be stronger for women than it is for men, due to the female tendency to actively seek information.

The use of fsQCA enables us to identify causal conditions between intention to interact with social media and various conditions (attributes) derived from a theory rarely used in general IS literature, i.e., the theory of trying (TT), as well as value-based thinking. The high consistency and coverage values of the identified causal configurations provide strong support for using the fsQCA approach in IS research, as an alternative to the more traditional statistical analysis, such as regression-based analysis. In addition to these theoretical considerations, the identified solutions also offer more actionable insights to practitioners in social media marketing. Specifically, we show that, instead of characterizing the 'average' behaviour of the users that one can obtain using statistical methods, a set of causal 'recipes' is needed to understand the thought processes of specific user groups.

6. Conclusion

This research provides an explanatory perspective on the conditions leading digital natives' intentions to interact with social media. The findings of this study differentiate from the most earlier studies on the value perception and interaction with social media that often use symmetric methods, such as multiple regression analysis to assess and analyse individual's behaviour on interacting with social media. Specifically, we use configurational thinking method to examine asymmetric relationships among the constituents of antecedent factors. The findings of this research support both research propositions and reveal that it is appropriate to treat individual's intention to interact with social

media as a trying process. Through an empirical study, we examine the link between value systems, attitude and intention through the perspective of the Theory of Trying. We can conclude that the available evidence is sufficient to draw a sound conclusion about the usefulness of the applied approach. We not only show that the attitude towards trying can be seen as a predictor of intention, but also manage to illustrate that perception of values (i.e., the domain-specific and global: either their presence or absence) affects the intentions of digital natives to interact with social media, and that there are clear gender differences. Thus, the main theoretical contribution of this research is that it provides new insight into how value systems affect intention of digital natives to interact with social media. We illustrate the necessity of the value-based thinking in IS research.

This research also shows the importance of considering and understanding the role of gender and its influence on the intention of social media users. By assessing the role of gender, we contribute to existing literature on social media research. Based on the perception of values, this research empirically shows how gender modifies and magnifies the intention. The results show that, while it is possible to obtain important insights without accounting for the gender of respondents, a more meticulous set of rules and associated user groups can be pinpointed by including gender as a condition. In fact, our analysis shows that when gender is considered as a condition in the fsQCA analysis, three sets of configurations were identified. The first set shows rules (configurations) which are applicable to all, the second set shows rules which are only applicable to males and the third set shows rules which are predominantly geared towards females.

At the more methodological level, our research contributes unique knowledge regarding the use of configurational thinking in IS research. By using the fsQCA, we are able to distinguish and show that the most important rule in both part of the analysis (i.e., with or without inclusion of the gender) is the same as the one establishing the connection between theory of trying, value systems and intention. However, the subjects considering social media maven (or the absence of this condition) an important condition in their decision process can be understood by including gender differences. This result in particular would be difficult to realize with traditional structural equation modelling technique, as the two-distinct group of rules (males and females) capture the behaviour of different user segments, instead of focusing on the overall behavioural patterns. We are fully aware of the fact that, one could argue that multi-group SEM analysis can be used to assess whether for instance, gender of the subjects affects the outcome of the analysis. However, we would like to stress that this approach does not uncover asymmetric causal relations and it would be hard to know whether gender (as a condition) is a necessary condition for the outcome of interest. As already pointed out, fsQCA entails the analysis of necessary and sufficiency to produce the outcome (Ragin, 2009). While necessary conditions are conditions that are required to produce the outcome of the interest,

sufficient conditions are conditions that always lead to the outcome of interest. Social media maven in our analysis seems to be a necessary condition for the outcome of the interest. Furthermore, what we may gain, through multi-group analysis using SEM approach, is that gender may or may not impact the outcome (dependent variable/s). While deep insights can be gained from findings of multi-group analysis, one cannot know if there are variations in the conditions within the obtained configurations (see e.g., Table 3, solutions 2-6). That said, it is not the aim of this paper to compare the SEM and fsQCA from strict analytical standpoint, as we merely aim to show that fsQCA as a configurational thinking method can be used to complement the SEM results, allowing to assess how factors combine lead to the outcome of interest. In this research, we show that, although individual factors of the value systems and theory of trying continue to be important to our understanding of the phenomenon under investigation, we admit that the synergetic nature among these factors creates a complex, multidimensional phenomenon. We show, by using fsQCA that the configuration of these factors is more important than the factors themselves individually.

There are limitations to our research that require further study. More research is needed into the social media maven (SMM) concept, for example by including subjects from different cultures, since the perception of value systems is to a large extent cultural in nature. The subjects participated in this research were selected from one of the Nordic countries and are all considered to be digital natives, which means they use the technology differently compared to non-digital native (digital immigrants) users. Future studies can focus on other regions (e.g., emerging countries), which may have a different culture and mind-set toward technology and the use of social media. As for the next step and future work, we also suggest conducting a follow-up study, preferably with a different generation, to capture the generational differences. In our future research, we aim to include the variables *frequency of past trying* and *recency of past trying* and conceptualize them as antecedent of trying and intention to try.

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Appendix A

Construct	Items	Mean	Median	Std. Deviation	Min	Max	α	CR	AVE
Domain-specific values	ESB-DS	4.17	4	1.522	1	7	0.907	0.895	0.568
	EWR-1-DS	4.5	5	1.563	1	7			
	EWR-2-DS	4.03	4	1.678	1	7			
	HFE-1-DS	3.57	4	1.595	1	6			
	HFE-3-DS	4.33	4	1.35	1	7			
	HFE-4-DS	4.02	4	1.396	1	7			
	AWR-1-DS	3.22	3	1.587	1	7			
	AWR-2-DS	2.75	2	1.62	1	7			
	AWR-3-DS	3.07	3	1.667	1	7			
	ASR-1-DS	3.14	3	1.571	1	7			
	ASR-3-DS	2.75	2	1.604	1	6			
Global values	ESB-2-GV	5.43	6	1.049	2	7	0.776	0.764	0.592
	ESB-5-GV	6.22	6	0.949	2	7			
	ESB-6-GV	5.97	6	1.017	2	7			
	EWR-3-GV	6.19	6	0.894	4	7			
	HE-1-GV	5.53	6	0.991	3	7			
	HE-2-GV	5.38	5	1.044	2	7			
	HE-3-GV	4.48	5	1.361	1	7			
	AWR-1-GV	5.05	5	1.07	1	7			
	AWR-2-GV	4.82	5	1.1	1	7			
	AWR-4-GV	4.91	5	1.309	1	7			
Attitude towards trying	ATT-1	5.61	6	0.842	3	7	0.816	0.831	0.624
	ATT-2	5.5	6	1.034	2	7			
	ATT-3	5.76	6	0.947	4	7			
Social media maven	SMM1	4.56	5	1.675	1	7	0.842	0.853	0.661
	SMM2	5.16	5	1.456	1	7			
	SMM3	4.57	5	1.416	1	7			
Intention to interact	INT1	5.32	6	1.778	2	7	0.753	0.775	0.636
	INT2	5.93	6	0.962	2	7			

Appendix B

Assessment of convergent and discriminant validity of constructs

	Domain-value	SMM	ATT	Intention	Global-value
Domain value	**0.684**				

Social media maven	0.243	**0.813**		
Attitude towards trying	0.012	0.270	**0.539**	
Intention	0.191	0.092	0.210	**0.790**
Global value	0.334	0.436	0.275	0.386	**0.798**

Appendix C

Construct	Item	Reference
Domain-specific values	EWR1: I would like to make a point of reassuring my friends that their posts are welcomed and appreciated by 'Liking' or re-tweeting	Homer and Kahle (1988) Kamakura and Novak (1992) Rokeach (1973) Xie, Bagozzi and Troye (2008)
	EWR2: It is important for me to share good posts and links with my friends	
	ESB: Interacting online through social media with my friends is important to me	
	HFE1: I think it is fun to look for stuff on different sites to share with my friends	
	HFE3: I find participation on-line exciting	
	HFE4: It gives me great pleasure to participate on-line	
	AWR1: I enjoy showing my friends that I am active on social media	
	AWR2: I care a lot about what others think about how active on social media I am	
	AWR3: I strive to retain the status as active on social media among my friends	
	ASR1: The fact that I am an active participant increases my self-respect	
	ASR3: My self-respect has a lot to do with my ability to post things that others 'like'	
Global values	ESB2: I play an important role among my friends and peers at the university	Homer and Kahle (1988) Kamakura and Novak (1992) Rokeach (1973) Xie, Bagozzi and Troye (2008)
	ESB5: I feel appreciated and needed by my closest friends	
	ESB6: I feel appreciated and needed by my friends and peers at the university	
	EWR3: I value warm relationships with my family highly	
	HE1: I enjoy doing things out of the ordinary	
	HE2: I strive to fill my life with exciting activities	
	HE3: I consider myself a thrill-seeker	
	AWR1: I strive to retain a high status among my friends	
	AWR2: I strive to retain a high status among my friends and peers at the university	
	AWR4: The opinions of others are important to me	
Social media maven	SMM1: If someone wanted to know which Internet sites had the best bargains on various types of products and services, I could tell them	Belch et al. (2000)
	SMM2: My family think of me as a good source of information from the Internet when it comes to new products, sites to visit, events	
	SMM3: My friends think of me as a good source of information from the Internet when it comes to new products, sites to visit, events	
Attitude towards trying	AI1: My trying to interact on-line with my friends would make me feel pleasant	Bagozzi and Edwards (1998) Bagozzi and Warshaw (1990) Mathur (1998)
	AI2: My trying to interact on-line with my friends would make me feel enjoyment	
	AS1: My trying to and succeeding in interacting on-line with my friends makes me feel pleasant	
Intention to interact	INT1: I intent to interact with my friends and peers on social media	Bagozzi and Warshaw (1990)
	INT2: When I invite friends to be my 'friend' I intend to interact with them	