

**RESEARCH ARTICLE**

# The impact of the implicit theories of social optimism and social pessimism on macro attitudes towards consumption

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**Abstract**

People have substantially differing attitudes towards consumption. Anti-consumers are negative towards consumption. In contrast, pro-consumers view consumption in a positive light. We posit that people's attitudes toward consumption at the societal (macro) level are impacted by the implicit theories they hold about whether society can solve the problems it faces. We identify two different implicit theories consumers hold regarding how solvable larger societal problems are. Social optimists believe that we will solve the problems that are emerging as we evolve at the societal level. In contrast, social pessimists believe that societal evolution is creating problems too large to be solved. We developed a macro attitudes model where social optimism and pessimism were posited to impact people's macro attitudes towards consumption. We present the results of a study that found that social optimists have more positive attitudes towards consumption and social pessimists have more negative attitudes towards consumption. We also found that this model provided a superior fit in comparison to three other plausible models relating implicit theories and attitudes towards consumption. These findings have implications for anti-consumption research, consumer research on implicit theories, and social marketing designed to address problems associated with overconsumption.

**KEYWORDS**

anti-consumption, attitude towards consumption, cornucopian, implicit theories, Malthusian, social optimism, social pessimism, sustainability, sustainable consumption

**1 | INTRODUCTION**

Consumption is so ubiquitous in modern developed societies that it may seem like this has been the norm throughout human history. However, this "mass consumption" has not always been the norm. As Katona (1964) explains:

*Throughout the course of human history, poverty has been the rule, riches the exception. Societies in the past were called affluent when their ruling classes lived in abundance and luxury. Even in the rich countries of the past, the great majority of people struggled for mere subsistence. (page 5)*

The industrial revolution was also a consumer revolution (DeVries, 2008; Miles, 1998). Within the past few hundred years,

many economies around the world have seen the rise in mass consumption diffuse throughout most of their societies. Products that were once seen as luxuries (or even indulgences) for the wealthy have become necessities for the masses (Matsuyama, 2002). In developed countries, the number of products which have gone from luxuries to necessities is quite large and includes products such as vacuum cleaners, washing machines, phones/smartphones, televisions, refrigerators, automobiles, air conditioners, and computers with internet connections (Matsuyama, 2002).

While many see this massive expansion of consumption as a positive development in our social evolution, there are also many who believe otherwise (e.g., Beck, 1992; Cherrier, 2009; Elgin, 1981; Glassner, 2010; Izberk-Bilgin, 2010; Jackson, 2017; Solomon et al., 2007; Witkowski, 2010). Thus, this rise of the mass consumption society has also seen a rise in the anti-consumption movement.

Consumption on the magnitude that many economies have seen over the past century comes with consequences. People have expressed concerns about how this increased consumption is affecting the fabric of society and the ecological balance of life on the planet (Dasgupta & Ehrlich, 2013). So why do so many people embrace rapidly expanding consumption (pro-consumers) while others are against it (anti-consumers)? That is the question we seek to address in this paper.

Based on the concept of attitude towards consumption recently introduced by Iyer and Muncy (2018, 2016a, 2016b), we seek to partially explain why some people are macro pro-consumers who embrace greater consumption for all while others are macro anti-consumers who believe that world consumption needs to decrease rather than increase. These are macro attitudes towards consumption because they are attitudes towards the overall societal level of consumption. This is in contrast to micro attitudes towards consumption which relate to consumption at the individual or organization level (see also Iyer & Muncy, 2009).

The construct that we explored to help explain these differences in macro attitudes towards consumption is that of implicit theories. *Implicit theories* are the theories which lay people hold in an area and which guide their judgments and behavior (Sternberg, Dweck, & Walton, 1985). These implicit theories have been shown to have a substantial impact on how people approach many different issues and life situations. The general expectation of the research explained in this paper was that people who accept one particular implicit theory (social optimism) would be more likely to be macro pro-consumers while people who hold a different implicit theory (social pessimism) would be more likely to be macro anti-consumers. Thus, as researchers try to gain a better understanding of the nature of anti-consumption, we posit that it is important to consider the individual difference variable of implicit theories in general and the specific implicit theories of social optimism and pessimism in particular.

In this paper, we begin by explaining the nature of implicit theories as a psychological individual difference variable that affects people's attitudes and behavior. Since people hold many different implicit theories, we discuss what type of implicit theory would be most likely to impact people's macro attitudes towards consumption. In particular, we identify the differing "theories" people may hold as to whether society will solve the problems it faces. These differing beliefs are captured in the constructs of social optimism and social pessimism so we discuss the nature of these constructs. Our empirical research relating the implicit theories of social optimism and pessimism to people's macro attitudes towards consumption is then presented and discussed. Finally, we explore several important implications of these research findings.

## 2 | EXPLICIT VERSUS IMPLICIT THEORIES

To understand how implicit theories might affect a person's macro attitude towards consumption, it is useful to first specifically look at what implicit theories are and how they are similar to yet different

from explicit theories. When an expert makes a prediction within their area of expertise, they apply the explicit theories of their discipline to do so. An *explicit theory* is a formalized construction of a phenomenon developed by professionals with the aid of formal data collection and analysis (Sternberg et al., 1985). Explicit theories guide scientific disciplines as they develop and evolve. They are used by experts within those disciplines to make predictions and exert control (Hunt, 1976).

Depending on which set of explicit theories an expert applies, dramatically different predictions can emerge. For example, in 1980 biologist Paul Ehrlich and economist Julian Simon placed a famous wager on how population growth would impact commodity prices over the decade of the 1980s. As president of Stanford's center for conservation biology, Ehrlich posited that overpopulation would result in substantial resource depletion, thus sending commodity prices skyrocketing. This was based on his extensive studies of the predictable patterns of vital resource scarcity that emerge when a species overpopulates a geographic area. He applied his biological explicit theories of population growth and bet that commodity prices would dramatically increase. Julian Simon, a Chicago trained economist teaching at the University of Illinois applied economic theories of how supply reacts to changes in demand and bet that commodity prices would actually fall (in real dollars) in the future. By applying well-developed biological theories versus well-developed economic theories, these two experts came to radically different predictions of the future.

As it turned out, Simon won the wager in that the real price of all five commodities (which were selected by Ehrlich) decreased over the 10-year period of the wager. The point here is not to argue that Simon's economic theories were superior to Ehrlich's biological theories. That has been debated extensively over the years (see, for example, Kiel, Matheson, & Golembiewski, 2010; Lawn, 2010) and so we will not explore that issue here. Resolving the debate between "Malthusians" and "Cornucopians" is not within the scope of the current article (and we intentionally avoid doing so). Rather the purpose here is to use the Simon-Ehrlich wager to illustrate how highly trained experts can and do take well developed and tested theories to make predictions of future consequences. However, based on the theory one applies, dramatically different approaches to dealing with potential future consequences could emerge. When one highly trained expert applied biological theories to a future concern, he came to a dramatically different conclusion than another highly trained expert who applied certain economic theories to the very same concern.

Psychologists have long noted that professionals are not the only ones who hold "theories" as to how the world operates. Lay people also develop their own theories, though they are not typically formalized and empirically tested. In fact, they may never even be explicitly stated or understood. Because of this, these lay theories which guide nonprofessionals' behavior and judgments have been labeled *implicit theories* (Sternberg et al., 1985). Just as with professionals and explicit theories, lay people may come to dramatically different conclusions about the world around them depending on which implicit theory they adopt. That is why implicit

theories hold potential for helping discover the reasons for differing conclusions regarding the value and/or threat of ever-increasing macro consumption.

### 3 | RESEARCH ON IMPLICIT THEORIES

Research on implicit theories can be traced to its infancy in the study of the differences between entity theorists and incremental theorists. *Entity theorists* have what has been labeled a "fixed mindset" (Dweck, 2007). Such a mindset believes (i.e., theorizes) that skills or abilities in an area are fixed. Though they can be refined and applied, they cannot be developed beyond that fixed amount. An entity theorist, for example, might believe that intelligence is fixed and people cannot achieve academically beyond their level of fixed intelligence. Intelligence is an entity in itself and we cannot change that entity. To the entity theorist, our academic achievements are limited by the amount of intelligence we possess and that amount is fixed.

In contrast, *incremental theorists* possess what has been labeled a "growth mindset" (Dweck, 2007). This mindset believes (i.e., theorizes) that skills or abilities can incrementally improve over time. That is, our abilities can grow and so they are not fixed. To the person who holds a growth mindset of intelligence, what we can achieve academically can improve over time as our intelligence improves. Our level of intelligence is not a fixed entity that is imposed upon us therefore also forcing us to accept our intellectual limitations. Instead, our intelligence is something that can improve over time as we work to improve it. They believe we can get incrementally better over time.

Those who studied these implicit theories were not attempting to resolve the nature/nurture debate. Though they might note that there were certain social, economic, or achievement advantages to accepting one mindset over the other, those advantages did not prove that the specific mindset is correct. The research focused on discovering how one mindset or the other affects things such as academic performance or responses to setbacks (Dweck, Chiu, & Hong, 1995). Does the belief that one can improve increase their motivation to improve? That is an important question and it is a fundamentally different line of inquiry than asking whether an upper limit actually exists in one's ability to improve. This is important to understand for our current research because we do not test the validity of any implicit theory. It is not our purpose to say that one certain implicit theory is right and another one is wrong. We focus exclusively on studying the impact that holding certain implicit theories has on people's attitudes towards consumption.

### 4 | IMPLICIT THEORIES AND MACRO ATTITUDES TOWARDS CONSUMPTION

The concept of implicit theories has been applied to a wide variety of topics. Consumer research on implicit theories can be traced back to

the very early years of implicit theory research itself (Pinson, 1986). Though the field of marketing's interest in implicit theories has been sporadic over the years (Areni, 2003; Hung & Wyer, 2008; Mathur, Jain, & Maheswaran, 2012; Yorkston, Nunes, & Matta, 2010), the past 5 years have seen a dramatic increase in interest in implicit theories among those who study marketing and consumer behavior (see, for example, Carnevale, Yucel-Aybat, & Kachersky, 2018; Hsieh & Yucel-Aybat, 2018; John & Park, 2016; Kwon & Nayakankuppam, 2015; Kwon, Seo, & Ko, 2016; Lin, Rai, & Tran, 2019; Mathur, Block, & Yucel-Aybat, 2014; Mathur, Chun, & Maheswaran, 2015; Park & John, 2018; Price, Coulter, Strizhakova, & Schultz, 2017; Song, Lee, & Kim, 2019; Yin, Yu, & Poon, 2015). Thus, implicit theory research has been shown not to just hold promise for the fields in which it initially developed (e.g., psychology and education) but also for the fields of consumer behavior and marketing.

Much of the expansive research on implicit theories focuses on the entity (i.e., fixed mindsets) versus incremental theorists (i.e., growth mindsets). The difference between entity and incremental theories impacts a wide array of psychological and behavioral constructs (Dweck, 2007). Given the pervasive effects of these two mindsets, we conducted two large scale studies on the impact of incremental versus entity theories on people's macro attitudes towards consumption. However, after conducting these studies, no significant relationships emerged from the data. Despite having large sample sizes ( $n = 160$  and  $n = 862$ ), we found no difference between incremental theorists and entity theorists as it relates to macro attitudes towards consumption. Upon reflection, we concluded that we failed to consider that researchers typically focus on those implicit theories that have a strong conceptual link to whatever their implicit theory research is being used to explain.

The closer the implicit theories are to the domain of the judgments or behaviors being studied, the stronger the identified effects have been. So, for example, Job, Dweck, and Walton (2010) studied the effect of implicit theories on ego depletion so they considered the implicit theories about whether a person's willpower wanes through use. When studying romantic relationships, Knee (1998) looked at implicit theories about whether two people were destined for each other. Since Kappes and Schikowski (2013) were interested in studying people's ability to cope with negative emotions, they explored implicit theories of emotional stability. To study shyness, Beer (2002) focused on implicit theories of shyness. In their study of leadership, Offermann, Kennedy, and Wirtz (1994) explored the implicit theories people developed about various areas of leadership.

Entity and incremental implicit theories do not have a strong conceptual link with macro attitudes towards consumption. Thus, in our two failed studies, it is likely that we did not identify an effect of implicit theories on macro attitudes towards consumption because we did not measure implicit theories that specifically relate to why people might develop positive or negative attitudes towards consumption. The problem with our earlier research was probably not with the concept of implicit theories in general but rather with the specific implicit theories we chose to employ to explain macro attitudes towards consumption.

So which implicit theory might consumers hold that could possess a strong conceptual link with macro attitudes towards consumption? Since macro attitudes towards consumption emerge from a concern (or lack thereof) for societal-level problems created by consumption (Iyer & Muncy, 2009), we explored the implicit theories people hold regarding society's ability to solve the problems it faces. Thus, we sought to explore whether the implicit theories of social optimism and social pessimism could partially explain why some people become macro anti-consumers and others become macro pro-consumers.

## 5 | SOCIAL OPTIMISM AND SOCIAL PESSIMISM

*Social pessimists* hold the implicit theory that the emerging problems facing this world are so large that human solutions might not be adequate to solve them. That is in contrast to *social optimists* who hold the implicit theory that society can and will solve these emerging problems. Schweizer and his colleagues introduced the concept of social optimism (Schweizer & Koch, 2001; Schweizer & Rauch, 2008; Schweizer & Schneider, 1997). They measured it by looking at respondents' perceptions on a wide array of social issues. Subjects were presented with a number of current social problems of concern (crime, poverty, environment, etc.). They were then asked whether they believed such problems were likely to be solved. The more likely that subjects believed certain problems would be solved, the more they were considered to possess social optimism. This research found that social optimism was correlated with personal optimism and this correlation increases with age. It also found that social optimism tends to be lower than personal optimism. The authors attributed this to the fact that the outcomes of personal optimism are generally in the control of the individual but the individual has little control over the objects of social optimism.

Note that social optimism and pessimism are similar to, but larger in scope than the Malthusian and cornucopian perspectives which are often debated (Ayres, 1993; Chenoweth & Feitelson, 2005; Cotgrove, 1982; Newman & Dale, 2008). Malthusians believe that, since population growth can be exponential, it has the potential to outstrip the linear growth of the supply of food and other essential commodities. Malthusians generally focus on the ecological effects of overpopulation—most specifically resource depletion. In responding to this concern, cornucopians posit that economic laws will not allow resource depletion to occur. They argue that the economic laws of supply and demand will either increase the supply or decrease the demand for any resource before it is depleted. Thus, the Malthusian/cornucopian debate generally focuses on the problem of resource depletion emerging from overpopulation versus the solution of free-market economic forces. Social pessimists share the Malthusian belief that the emerging problems society faces are too large to be solved. Social optimists share the cornucopian belief that the larger societal problems are temporary and will be solved.

Despite these similarities, the scope of social optimism versus social pessimism is much broader than what one finds in the Malthusian versus cornucopian debate. Social optimism and social pessimism are general guiding beliefs about whether problems will or will not be solved but they are not specific as to which problems are of concern or how such problems will be solved. This is consistent with how implicit theories are typically constructed and measured.

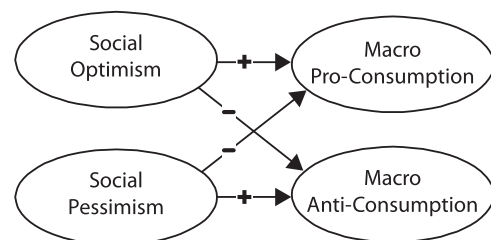
Due to dimensionality concerns with the Schweizer approach to measuring social optimism (see Schweizer & Rauch, 2008) we develop our own measures of social optimism and pessimism. Consistent with other studies relating to implicit theories, we needed unidimensional measures of whether respondents believe whether societal problems in general would be solved. Our operationalization of social optimism/pessimism did not get down to a more granular level in looking at which problems might be solved or what solutions might solve them.

## 6 | RESEARCH HYPOTHESES AND COMPARATIVE MODELS

Our overriding research goal was to see if we could identify the effects of social optimism and pessimism on people's macro attitudes towards consumption. It should be noted that social pessimism is not presented here as simply the opposite of social optimism. Schweizer and Rauch (2008) found these to be two separate factors and not simply the inverse of one another. Also macro pro-consumption is not simply the opposite of macro anti-consumption. Iyer and Muncy (2016b) found them to be separately identifiable constructs and, as pointed out by Chatzidakis and Lee (2013), the reasons for are not simply the opposite of the reasons against. Thus, the four focal variables of the current research are macro anti-consumption attitudes, macro pro-consumption attitudes, social optimism, and social pessimism. The hypothesized relationships between these variables are presented in Figure 1 which we label the macro attitudes model.

### 6.1 | Research hypotheses

If a person holds the implicit theory that societal-level problems can and will be solved, then, for reasons discussed above, they are likely to see increasing consumption as a good thing and not likely to see



**FIGURE 1** Focal model of current research: The macro attitudes model

consumption in general as something that should be limited or avoided. Thus, the first two hypotheses we tested were

**Hypothesis 1:** *Social optimism is positively related to macro pro-consumption attitudes.*

**Hypothesis 2:** *Social optimism is negatively related to macro anti-consumption attitudes.*

In contrast, also for reasons discussed above, if someone believes that society cannot solve the problems it faces, then they may be more concerned about the potential problems created by overconsumption. This would therefore make them less likely to hold macro pro-consumption attitudes and more likely to hold macro anti-consumption attitudes. Thus, the other two hypotheses we tested were

**Hypothesis 3:** *Social pessimism is negatively related to macro pro-consumption attitudes.*

**Hypothesis 4:** *Social pessimism is positively related to macro anti-consumption attitudes.*

**6.2 | Three comparative models**

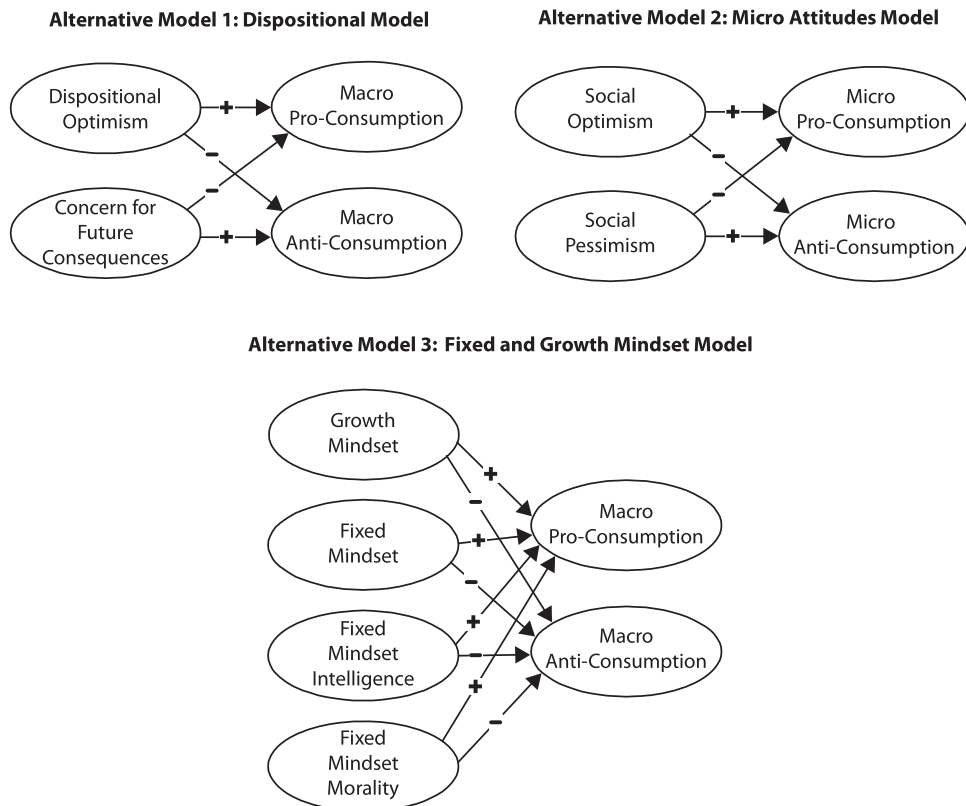
Our research will be using structural equations modeling (SEM) to analyze our data. SEM can only reveal how well the data fits a

particular model. It cannot determine the theoretical and/or practical significance of that fit. To ascertain the practical or theoretical significance of the fit identified in an SEM analysis, alternative plausible models are often tested, thus providing a reference point against which the model of interest can be judged (Kline, 1998). With that in mind, we collected data on certain other variables that might pose a different plausible explanation for the relationships we are exploring in our focal model. In particular, we tested three other alternative models to see if our focal model's fit was superior to them and to eliminate the possibility that our findings are simply due to common method bias. These three other plausible models are presented in Figure 2.

In deriving these three alternative models, we looked at variables that are similar to our focal model's independent and dependent variables but which also differ from these focal variables in a way that reflects the conceptual reasoning behind the macro attitudes model. It should be noted that the focus of our research was on the macro attitudes model and not these alternative models. In a sense, we are using these other three models as a baseline against which the macro attitudes model can be judged. With that in mind, the reason we selected these other three models as points of comparison will now be explained in terms of how they are both similar to but different from our focal model.

**6.2.1 | The individual disposition model**

The first model we used for comparison purposes looked at two independent variables similar to social optimism and pessimism but



**FIGURE 2** Three alternative models for comparison purposes

which are reflective of individual dispositions and concerns as opposed to implicit theories about societal-level problems. We call it the individual disposition model (see Figure 2) because it looks at whether macro attitudes towards consumption are simply due to individual dispositions to be optimistic/pessimistic or concerned about the future. Social optimism is distinct from personal optimism (Schweizer & Rauch, 2008). To see if it is social optimism and not personal optimism that is driving macro consumption attitudes, we compared our focal model against one where macro consumption attitudes are accounted for by differences in dispositional optimism.

In addition, we are using concern for future consequences as a comparison point to social optimism and pessimism. The individual disposition model looks at whether respondents were concerned for the future or whether they just stayed focused on the here and now. We wanted to investigate if the macro attitudes effect is because people see the future consequences differently (as in the case of the implicit theories of social optimism and pessimism) and not simply because they either care or do not care about the future. If the macro attitudes model (Figure 1) accurately reflects what is driving macro attitudes towards consumption, then it should have superior explanatory power over a model that removes social optimism/pessimism and replaces them with dispositional optimism and concern for future consequences.

### 6.2.2 | The micro attitudes model

Our second model we used for comparison purposes removed macro level attitudes towards consumption and replaced them with micro level consumption attitudes. Anti-consumption and pro-consumption have been explored at both the macro (societal) level and at the micro (individual) level (Iyer & Muncy, 2009, 2016a, 2016b, 2018). Our hypotheses were based on the supposition that *societal-level* attitudes towards consumption emerge from perceptions of *society's* ability to solve problems. Thus, we are proposing an implicit theory about *societal-level* problems impacting *societal-level* attitudes towards consumption. We might expect social optimism to have some effect on micro consumption attitudes but not as large of an effect as they would have on macro consumption attitudes. Thus, we would expect the macro attitudes model to have superior explanatory power in comparison to the micro attitudes model.

### 6.2.3 | The growth mindset model

In all of the implicit theory literature, by far the most well-established connections are between people's beliefs in their ability to improve and a host of other variables. Thus, in a generic sense, the most promising implicit theories that might produce substantive effects would be related to growth. However, our focal model is not simply saying that an implicit theory affects attitudes towards consumption. It is that the specific implicit theories related to solving future problems are related to macro-consumption attitudes. We measured incremental theories (growth mindsets) and entity theories (fixed mindsets). We also looked at these mindsets specifically related to intelligence and morality. For those latter two however, we only

looked at the fixed mindsets. That is because researchers have found a big social desirability bias when measuring growth mindsets in those areas. People seem to feel much more comfortable in saying that it is possible to grow intellectually and morally than they are with saying it is not possible to grow in these areas. If the macro attitudes model has a superior fit to the growth mindsets model, that would mean that there is something specific to the implicit theories of social optimism and pessimism that impacts people's attitude towards consumption. It would also support our initial findings from the two unpublished failed studies mentioned earlier that it is important to apply implicit theories in a domain specific manner.

## 7 | METHODOLOGY

### 7.1 | Data collection and sample

To ensure adequate diversity among respondents, the current study used a quota sample based on gender (male and female) and age (under 40 and 40 or older). Following established field research data gathering procedures (e.g., Arnold & Reynolds, 2003; Iyer & Muncy, 2016b), one of the researchers recruited undergraduate students and trained them to administer an online survey. They were instructed to recruit only nonstudent participants. These student helpers were instructed to select the respondents, explain the nature of the research study, and ask for participation in the study. Once the respondents agreed to participate in the study, they were asked to fill out the questionnaire using online data collection software. The respondents were required to provide their name and contact information for verification of participation in the study. The entire data collection process lasted 3 weeks. The study was conducted in a Midwestern U.S. city. Therefore, the sample is a regional quota sample. A total of 329 questionnaires were received. Due to analysis concerns, surveys were discarded where subjects did not fill out every single questionnaire item. This resulted in a final sample of 291 usable responses. The sample for the study comprised of females (50%) and the average age of the respondents was 40 years.

### 7.2 | Construct operationalization

As shown in Tables 1a and 1b, most measures were adapted from established scales that have been successfully used in other research. Anti-consumption (micro and macro) and pro-consumption (micro and macro) were measured using the Iyer and Muncy (2016b) scale. The concern for future consequences was measured using the scale developed by Strathman, Gleicher, Boninger, and Edwards (1994). Dispositional Optimism (only the negative items) were measured through the Life Orientation Test developed by Scheier and Carver (1985). Incremental theorist and entity theorist that helps capture the mindset of the individuals was measured using the Dweck et al. (1995) scale. Similarly, the implicit theory of intelligence and the implicit theory of morality was measured using the Dweck et al. (1995) scales for these constructs.

**TABLE 1a** Focal model measurement items and standardized loadings

| Scale items   | Focal model | Alternative model 1 | Alternative model 2 | Alternative model 3 | Source adapted from                  |
|---|-------------|---------------------|---------------------|---------------------|--------------------------------------|
| Focal model: Macro attitudes model scale items  |             |                     |                     |                     |                                      |
| Social optimism (SOPT)  |             |                     |                     |                     |                                      |
| I am confident in mankind's ability to solve the problems that lie ahead of us.   | 0.64        |                     | 0.64                |                     | Created for the study by the authors |
| The major problems that we face today are not a threat to our future because we will find solutions to them.  | 0.72        |                     | 0.72                |                     |                                      |
| When I see a big problem the world faces, it does not concern me that much because I know we will eventually solve it.  | 0.78        |                     | 0.79                |                     |                                      |
| When I think of social or environmental issues we face, I am not concerned about the future. We will find ways to solve the problems we face. We always have. | 0.81        |                     | 0.81                |                     |                                      |
| Social pessimism (SPESS)  |             |                     |                     |                     |                                      |
| There are serious social and environmental problems we face that we may never be able to solve.   | 0.68        |                     | 0.66                |                     | Created for the study by the authors |
| Economic growth is creating problems faster than technological advances can probably solve them.  | 0.63        |                     | 0.62                |                     |                                      |
| The human race is getting to the point where it is creating problems that will never be solved.   | 0.77        |                     | 0.80                |                     |                                      |
| When I think of the big problems that are emerging in today's society and economy, I am frightened that they will overtake us.                                | 0.79        |                     | 0.76                |                     |                                      |
| Macro pro-consumption (MAPC)  |             |                     |                     |                     |                                      |
| Consumer spending helps us all by keeping the economy growing.  | 0.77        | 0.77                |                     | 0.78                | Iyer and Muncy (2016a, 2016b)        |
| A growing economy is good for all of us.  | 0.73        | 0.74                |                     | 0.74                |                                      |
| The economy suffers when people stop spending their money.  | 0.70        | 0.70                |                     | 0.69                |                                      |
| When I spend my money, it helps others and not just me.   | 0.68        | 0.66                |                     | 0.66                |                                      |
| Macro anti-consumption (MAAC)   |             |                     |                     |                     |                                      |
| If we all consumed less, the world would be a better place.   | 0.78        | 0.80                |                     | 0.80                | Iyer and Muncy (2016a, 2016b)        |
| We must all do our part to conserve.  | 0.58        | 0.55                |                     | 0.55                |                                      |
| People should not buy so many things that they do not need.   | 0.66        | 0.63                |                     | 0.63                |                                      |
| It would benefit future generations if people today would quit consuming so much.   | 0.82        | 0.83                |                     | 0.84                |                                      |

**TABLE 1b** Additional measurement items and standardized loadings used for alternative models

| Scale items  | Focal model | Alternative model 1 | Alternative model 2 | Alternative model 3 | Source adapted from                                   |
|--|-------------|---------------------|---------------------|---------------------|---|
| Alternative 1: Dispositional model additional scale items  |             |                     |                     |                     |   |
| Dispositional optimism (DON)   |             |                     |                     |                     |   |
| If something can go wrong for me, it will.   |             | 0.78                |                     |                     | Scheier and Carver (1985);<br>negative items from LOT |
| I hardly ever expect things to go my way.  |             | 0.82                |                     |                     |   |
| Things never work out the way I want them to.  |             | 0.80                |                     |                     |   |
| I rarely count on good things happening to me.   |             | 0.74                |                     |                     |   |
| Concern for future consequences (CFC)  |             |                     |                     |                     |   |
| I only act to satisfy immediate concerns, figuring the future will take care of itself.  |             | 0.66                |                     |                     | Strathman et al. (1994)                               |
| I generally ignore warnings about possible future problems because I think the problems will be resolved before they reach crisis-level. |             | 0.71                |                     |                     |   |
| I think that sacrificing now is usually unnecessary since future outcomes can be dealt with at a later time.                             |             | 0.72                |                     |                     |   |
| I only act to satisfy immediate concerns, figuring that I will take care of future problems that occur at a later date.                  |             | 0.85                |                     |                     |   |
| Alternative 2: Micro attitudes model additional scale items  |             |                     |                     |                     |   |
| Micro pro-consumption (MIPC)   |             |                     |                     |                     | Iyer and Muncy (2016a, 2016b)                         |
| I love to shop.  |             | 0.70                |                     |                     |   |
| It seems like the more expensive something is, the more I want it.   |             | 0.57                |                     |                     |   |
| When I buy nice things, it usually makes me feel good about myself.  |             | 0.60                |                     |                     |   |
| Some people are spenders and some people are savers. I am a spender.   |             | 0.87                |                     |                     |   |
| Micro anti-consumption (MIAC)  |             |                     |                     |                     |   |
| I love living a life free from the clutter of too many material things.  |             | 0.78                |                     |                     | Adapted from Iyer and Muncy<br>(2016a, 2016b)         |
| If I don't need it, I don't buy it.  |             | 0.73                |                     |                     |   |
| I avoid having too many things that will clutter up my life.   |             | 0.75                |                     |                     |   |
| I like a simpler life, not one filled with material things.  |             | 0.83                |                     |                     |   |
| The fewer things I own, the better I feel.   |             | 0.73                |                     |                     |   |
| Alternative 3: Growth mindset model additional scale items   |             |                     |                     |                     |   |
| Incremental theorist (GM)  |             |                     |                     |                     | Dweck et al. (1995)                                   |
| Everyone, no matter who they are, can significantly change their basic characteristics.  |             | 0.80                |                     |                     |   |
| People can substantially change the kind of person they are.   |             | 0.83                |                     |                     | (Continues)   |



TABLE 1b (Continued)

| Scale items   | Focal model | Alternative model 1 | Alternative model 2 | Alternative model 3 | Source adapted from |
|---|-------------|---------------------|---------------------|---------------------|---------------------|
| No matter what kind of person someone is, he or she can always change very much.  |             |                     | 0.81                | 0.81                |                     |
| People can change even their most basic qualities.  |             |                     | 0.87                | 0.87                |                     |
| <b>Entity theorist (FM)</b>   |             |                     |                     |                     | Dweck et al. (1995) |
| The kind of person someone is something very basic about him or her and it cannot be changed very much.   |             |                     | 0.81                | 0.81                |                     |
| People can do things differently, but the important parts of who they are can't really be changed.  |             |                     | 0.86                | 0.86                |                     |
| Everyone is a certain kind of person and there is not much that can be done to really change that.  |             |                     | 0.86                | 0.86                |                     |
| As much as I hate to admit it, you can't teach an old dog new tricks. People can't really change their deepest attributes.                          |             |                     | 0.72                | 0.72                |                     |
| <b>Implicit theory of intelligence-fixed (FMINT)</b>  |             |                     |                     |                     | Dweck et al. (1995) |
| You have a certain amount of intelligence and cannot really do much to change it.   |             |                     | 0.92                | 0.92                |                     |
| Your intelligence is something about you that you cannot change much.   |             |                     | 0.93                | 0.93                |                     |
| You can learn new things; but you cannot change your basic intelligence.  |             |                     | 0.88                | 0.88                |                     |
| <b>Implicit theory of morality-fixed (FMMOR)</b>  |             |                     |                     |                     | Dweck et al. (1995) |
| A person's moral character is something very basic about him or her and it can't be changed very much.  |             |                     | 0.82                | 0.82                |                     |
| Whether or not a person is responsible and sincere is something that is deeply ingrained in his or her personality. It cannot be changed very much. |             |                     | 0.89                | 0.89                |                     |
| There is not much that can be done to change a person's moral traits (e.g., conscientiousness, uprightness and honesty).                            |             |                     | 0.89                | 0.89                |                     |

Abbreviation: LOT, life orientation test.

**TABLE 2** Standardized construct correlation matrix and descriptive statistics

| Measures  | Focal model |         |         |        | Alternative model 1 |        | Alternative model 2 |       | Alternative model 3 |        |        |       |
|---|-------------|---------|---------|--------|---------------------|--------|---------------------|-------|---------------------|--------|--------|-------|
|   | SOPT        | SPESS   | MAPC    | MAAC   | DON                 | CFC    | MIPC                | MIAC  | GM                  | FM     | FMINT  | FMMOR |
| <i>Focal model: Macro attitudes model scales</i>              |             |         |         |        |                     |        |                     |       |                     |        |        |       |
| Social optimism (SOPT)  |             |         |         |        |                     |        |                     |       |                     |        |        |       |
| Social pessimism (SPESS)                                      | -0.41**     |         |         |        |                     |        |                     |       |                     |        |        |       |
| Macro proconsumption (MAPC)                                   | 0.28**      | -0.21** |         |        |                     |        |                     |       |                     |        |        |       |
| Macro anticonsumption (MAAC)                                  | -0.28**     | 0.42**  | -0.13** |        |                     |        |                     |       |                     |        |        |       |
| <i>Alternative 1: Dispositional model additional scales</i>   |             |         |         |        |                     |        |                     |       |                     |        |        |       |
| Dispositional optimism (DON)                                  | -0.11       | 0.34**  | -0.09   | 0.01   |                     |        |                     |       |                     |        |        |       |
| Concern for future consequences (CFC)                         | 0.20**      | 0.18**  | -0.04   | -0.09  | 0.39**              |        |                     |       |                     |        |        |       |
| <i>Alternative 2: Micro attitudes model additional scales</i> |             |         |         |        |                     |        |                     |       |                     |        |        |       |
| Micro proconsumption (MIPC)                                   | 0.13*       | 0.15**  | 0.16**  | -0.07  | 0.15*               | 0.31** |                     |       |                     |        |        |       |
| Micro anticonsumption (MIAC)                                  | 0.01        | -0.00   | 0.05    | 0.30** | 0.00                | -0.10  | -0.45**             |       |                     |        |        |       |
| <i>Alternative 3: Growth mindset model additional scales</i>  |             |         |         |        |                     |        |                     |       |                     |        |        |       |
| Entity theorist (GM)  | 0.06        | 0.04    | -0.01   | 0.02   | 0.00                | -0.11  | -0.07               | -0.02 |                     |        |        |       |
| Incremental theorist (FM)                                     | 0.05        | 0.11    | 0.06    | 0.07   | 0.22**              | 0.23** | 0.17**              | 0.04  | -0.62**             |        |        |       |
| Implicit theory of intelligence (FMINT)                       | 0.06        | 0.12*   | 0.03    | 0.02   | 0.08                | 0.18** | 0.06                | 0.03  | -0.17**             | 0.24** |        |       |
| Implicit theory of morality (FMMOR)                           | 0.04        | 0.16**  | 0.09    | 0.05   | 0.22**              | 0.29** | 0.14*               | 0.02  | -0.43**             | 0.57** | 0.31** |       |
| <i>Descriptive statistics</i>                                 |             |         |         |        |                     |        |                     |       |                     |        |        |       |
| Mean  | 3.74        | 4.21    | 5.47    | 5.00   | 3.36                | 3.14   | 3.67                | 4.23  | 4.57                | 3.99   | 3.40   | 4.03  |
| Standard deviation  | 1.22        | 1.16    | 0.91    | 1.13   | 1.24                | 1.11   | 1.30                | 1.23  | 1.21                | 1.39   | 1.55   | 1.49  |
| Construct reliability (CR)                                    | 0.83        | 0.81    | 0.81    | 0.80   | 0.86                | 0.83   | 0.77                | 0.88  | 0.88                | 0.89   | 0.94   | 0.90  |
| Average variance extracted (AVE)                              | 0.55        | 0.51    | 0.52    | 0.51   | 0.61                | 0.55   | 0.50                | 0.58  | 0.70                | 0.66   | 0.83   | 0.75  |

\* $p < .05$ ;\*\* $p < .01$ .

As for social optimism and pessimism, we developed the scales for these constructs in accordance with the procedure suggested by Churchill (1979). Initially, two sets of students were asked to reflect on whether society was capable of solving the problems it faces. The first set of students ( $n = 18$ ) were asked to develop specific statements regarding society's ability to solve problems. The second set of students ( $n = 32$ ) discussed, evaluated, expanded upon, and critique the list of statements developed by the first set of students. As a result, a set of 28 items were developed and evaluated through exploratory factor analysis (EFA). Through this EFA, eight items were selected for the scales we used for social optimism (four items) and social pessimism (four items). The reliability of these items proved adequate through the testing of the SEM measurement model of the

current research and the nomological validity was supported by the SEM testing of the conceptual model (see discussion below). As such, adequate validity and reliability of these new social optimism and social pessimism scales appears to be present.

## 8 | RESULTS

### 8.1 | Adequacy of the measures: Reliability, validity, and measurement model

Following the Anderson and Gerbing (1988) process, the measurement quality of the indicators was evaluated. A confirmatory factor analysis (CFA) using maximum likelihood method of the covariance

matrix was performed. Anderson and Gerbing (1988) recommend that researchers first refine the measurement model before testing the structural component of the model. The goal was a final set of items with acceptable discriminant and convergent validity, internal consistency, reliability, and parsimony. Every factor in this study was significant at the 0.01 level and all individual reliabilities were above the required value of 0.4 (Bagozzi & Baumgartner, 1994). Bagozzi, Yi, and Phillips (1991) and Bagozzi and Baumgartner (1994) recommended a composite reliability of at least 0.7. This requirement was met. After assessing the individual factors, the reduced set of items was subjected together to a CFA using maximum likelihood estimation. The study tested for common method variance using both the Harman's One Factor test and the marker variable in the confirmatory analysis model. There was no evidence that common method bias was biasing the overall results. The results of the CFA showed that the overall measurement model (consisting of all the constructs used in the study) has an acceptable fit for the data ( $\chi^2 = 1491.85$ ,  $df = 968$ ,  $p < .001$ ;  $\chi^2/df = 1.54$ ; root mean square error of approximation [RMSEA] = 0.043; comparative fit index [CFI] = 0.93; nonnormed fit index [NNFI] = 0.92).

The standardized construct correlation matrix of the CFA is presented in Table 2. The average variance extracted (AVE) and the construct reliability of the measures are presented in the table as well. In each of the cases, the AVE exceeds the squared correlation estimates between the constructs. Thus, the measures display adequate discriminant validity. This combined with a good fit and convergent validity suggests that the results have adequate construct validity. The reliability of the scales was assessed via the calculation of composite reliability scores. These scores ranged from 0.77 to 0.94, all of which are above the cutoff of 0.6 suggested by Bagozzi et al. (1991). Based on these results, the measures have sufficient validity and reliability and allow for further testing of the relationships.

## 8.2 | Testing the competing models

The four competing structures were compared following the guidelines provided by Anderson and Gerbing (1988). Our focal model, the macro attitudes model, fits the data acceptably: CFI = 0.94, NNFI (TLI) = 0.93, RMSEA = 0.058, and three of the four hypotheses were supported at the 0.05 level (75%). The one hypothesis that did not receive support at the 0.05 level was approaching significance with  $p = .58$ . The dispositional alternative model also fits the data acceptably: CFI = 0.95, NNFI (TLI) = 0.94, RMSEA = 0.056, and one of the four hypotheses is supported (25%). The micro attitudes alternative model has less than adequate acceptable fits to the data: CFI = 0.90, NNFI (TLI) = 0.88, RMSEA = 0.078, and two of the four hypothesized paths are significant (50%). Finally, the growth mindset alternative model also fits the data adequately: CFI = 0.97, NNFI (TLI) = 0.96, RMSEA = 0.048. However, none of the eight hypotheses are supported (0%). Table 3 reports the fit indices of the measurement model and the structural model along with key measurement parameters and the variance extracted from each of the structural models.

## 8.3 | Selecting the final model

According to Joreskog and Sorbom (1993), an appropriate basis for choosing among competing models is to consider both model parsimony and fit. They suggest the use of three measures—akaike information criteria (AIC), expected cross validation index (ECVI), and comparison of akaike information criteria (CAIC)—each of which are functions of model chi-square and degrees of freedom, to assist in choosing from among competing models. While primarily considering the substantive knowledge of the subject area, the model with the smallest value of these measures should be chosen. In addition, the parsimony normed fit index (PNFI) is also useful when choosing from among competing models. Using this measure, the model with the greatest value should be chosen. Table 4 reports the selection criteria for all four models in Figures 1 and 2.

From Table 4 it is clear that our focal model, the macro attitudes model, is the superior model. It explains a significant proportion of the variance in macro anti-consumption (27%) and macro pro-consumption (12%). Further, it provides support to three of the four proposed hypotheses and it explains a higher level of variance in the outcome variables. The structural relationships among the constructs used in each of the models are presented in Table 5.

## 9 | DISCUSSION

In this paper, we posited that implicit theories have the potential to help explain the differences between macro pro-consumers and macro anti-consumers. Initially, we explored the most commonly researched implicit theories—entity theories versus incremental theories. In two previous studies, these did not show a significant relationship with macro attitudes towards consumption. We conducted another study that looked at a different set of implicit theories. Since macro anti-consumption has been found to relate to the future societal consequences of overconsumption, we looked at the differences between those who think society is capable of solving the problems it faces (social optimists) and those who think that such problems are too large to be solved (social pessimists).

We developed a model in which it was hypothesized that social optimism would be positively related to macro pro-consumption and negatively related to macro anti-consumption. The model predicted the opposite relationships for social pessimism. We called this model the macro attitudes model and it was the focus of our research. Our purpose for the current research was to test this model both in isolation and in comparison to three other plausible models which also relate to attitudes towards consumption and/or social optimism/pessimism.

After going through the standard scale development process to develop measures of social optimism and social pessimism, we tested the macro attitudes model. Looking at the model by itself, the model provided a good fit with the data. All of the correlations between social optimism/pessimism and macro attitudes towards consumption were significant at the 0.01 level in the direction hypothesized by the macro attitudes model. Employing SEM, three of the four path coefficients were significant and the other one was approaching

**TABLE 3** Analysis of nested models

| Model                                 | $\chi^2$ (df)            | <i>p</i> | RMSEA | NNFI | CFI  | <i>R</i> <sup>2</sup> |
|---------------------------------------|--------------------------|----------|-------|------|------|-----------------------|
| Measurement models:                   |                          |          |       |      |      |                       |
| Overall                               | 1491.85 <sub>(968)</sub> | .00      | 0.043 | 0.92 | 0.93 |                       |
| Measurement model (Focal model)       | 196.04 <sub>(98)</sub>   | .00      | 0.059 | 0.93 | 0.94 |                       |
| Measurement model 2 (Alternative 1)   | 180.15 <sub>(98)</sub>   | .00      | 0.054 | 0.94 | 0.95 |                       |
| Measurement model 3 (Alternative 2)   | 241.60 <sub>(113)</sub>  | .00      | 0.063 | 0.92 | 0.94 |                       |
| Measurement model 4 (Alternative 3)   | 312.81 <sub>(194)</sub>  | .00      | 0.046 | 0.96 | 0.97 |                       |
| Structural models:                    |                          |          |       |      |      |                       |
| Macro attitudes model (Focal model)   | 196.80 <sub>(99)</sub>   | .00      | 0.058 | 0.93 | 0.94 |                       |
| Macro anti-consumption                |                          |          |       |      |      | 0.27                  |
| Macro pro-consumption                 |                          |          |       |      |      | 0.12                  |
| Dispositional model (Alternative 1)   | 189.47 <sub>(99)</sub>   | .00      | 0.056 | 0.94 | 0.95 |                       |
| Macro anti-consumption                |                          |          |       |      |      | 0.03                  |
| Macro pro-consumption                 |                          |          |       |      |      | 0.01                  |
| Micro-Attitudes model (Alternative 2) | 316.79 <sub>(114)</sub>  | .00      | 0.078 | 0.88 | 0.90 |                       |
| Micro anti-consumption                |                          |          |       |      |      | 0.01                  |
| Micro pro-consumption                 |                          |          |       |      |      | 0.10                  |
| Growth mindset (Alternative 3)        | 324.02 <sub>(195)</sub>  | .00      | 0.048 | 0.96 | 0.97 |                       |
| Macro anti-consumption                |                          |          |       |      |      | 0.03                  |
| Macro pro-consumption                 |                          |          |       |      |      | 0.02                  |

Abbreviations: CFI, comparative fit index; NNFI, nonnormed fit index; RMSEA, root mean square error of approximation.

**TABLE 4** Path comparisons of focal model to three alternative models

| Model                    | Relationships | Model 1 | Model 2 | Model 3 | Model 4 |
|--------------------------|---------------|---------|---------|---------|---------|
| Focal model              |               |         |         |         |         |
| Macro attitudes model    | SOPT → MAPC   | 0.24**  |         |         |         |
|                          | SOPT → MAAC   | -0.16*  |         |         |         |
|                          | SPESS → MAPC  | -0.16   |         |         |         |
|                          | SPESS → MAAC  | 0.43**  |         |         |         |
| Three alternative models |               |         |         |         |         |
| Dispositional model      | DON → MAPC    |         | -0.09   |         |         |
|                          | DON → MAAC    |         | 0.13    |         |         |
|                          | CFC → MAPC    |         | -0.02   |         |         |
|                          | CFC → MAAC    |         | -0.17*  |         |         |
| Micro attitudes model    | SOPT → MIPC   |         |         | 0.28**  |         |
|                          | SOPT → MIAC   |         |         | -0.07   |         |
|                          | SPESS → MIPC  |         |         | 0.33**  |         |
|                          | SPESS → MIAC  |         |         | -0.07   |         |
| Growth mindset model     | GM → MAPC     |         |         |         | 0.09    |
|                          | GM → MAAC     |         |         |         | 0.16    |
|                          | FM → MAPC     |         |         |         | 0.05    |
|                          | FM → MAAC     |         |         |         | 0.22    |
|                          | FMINT → MAPC  |         |         |         | -0.03   |
|                          | FMINT → MAAC  |         |         |         | 0.01    |
|                          | FMMOR → MAPC  |         |         |         | 0.14    |
|                          | FMMOR → MAAC  |         |         |         | 0.01    |

\*\**p* < .01;

\**p* < .05.

significance (*p* = .058). The R-square values for anti-consumption and pro-consumption were 0.27 and 0.12, respectively. Taken together, we concluded that the analysis provided significant and substantial support for the macro attitudes model.

When using SEM, it can be useful to compare models against other plausible models. Thus, we compared the macro attitudes model to three

alternative models using additional data collected from the same subjects. For these three alternative models, only two of the 16 correlation coefficients and three of the 16 path coefficients were statistically significant. All of the six R-squares were below those obtained from the macro attitudes model and five of the six R-squares were 0.03 and below. Thus, we concluded that, not only did the macro attitudes model perform

**TABLE 5** Model selection criteria

| Model   | $\chi^2/df$ | AIC     | ECVI | CAIC    | PNFI | # (%) of Hypotheses supported |
|---|-------------|---------|------|---------|------|-------------------------------|
| Measurement:<br>Overall                             | 1.54        | 1811.85 | 6.25 | 2559.58 | 0.74 | NA                            |
| Structural:<br>Focal model<br>Macro attitudes model | 1.99        | 270.80  | 0.93 | 443.71  | 0.74 | 3 of 4 (75%)                  |
| Alternative models                                  |             |         |      |         |      |                               |
| Alternative 1: Dispositional model                  | 1.91        | 263.47  | 0.91 | 436.39  | 0.74 | 1 of 4 (25%)                  |
| Alternative 2: Micro attitudes model                | 2.78        | 394.79  | 1.36 | 577.05  | 0.71 | 2 of 4 (50%)                  |
| Alternative 3: Growth mindset model                 | 1.66        | 440.02  | 1.52 | 711.07  | 0.78 | 0 of 8 (0%)                   |

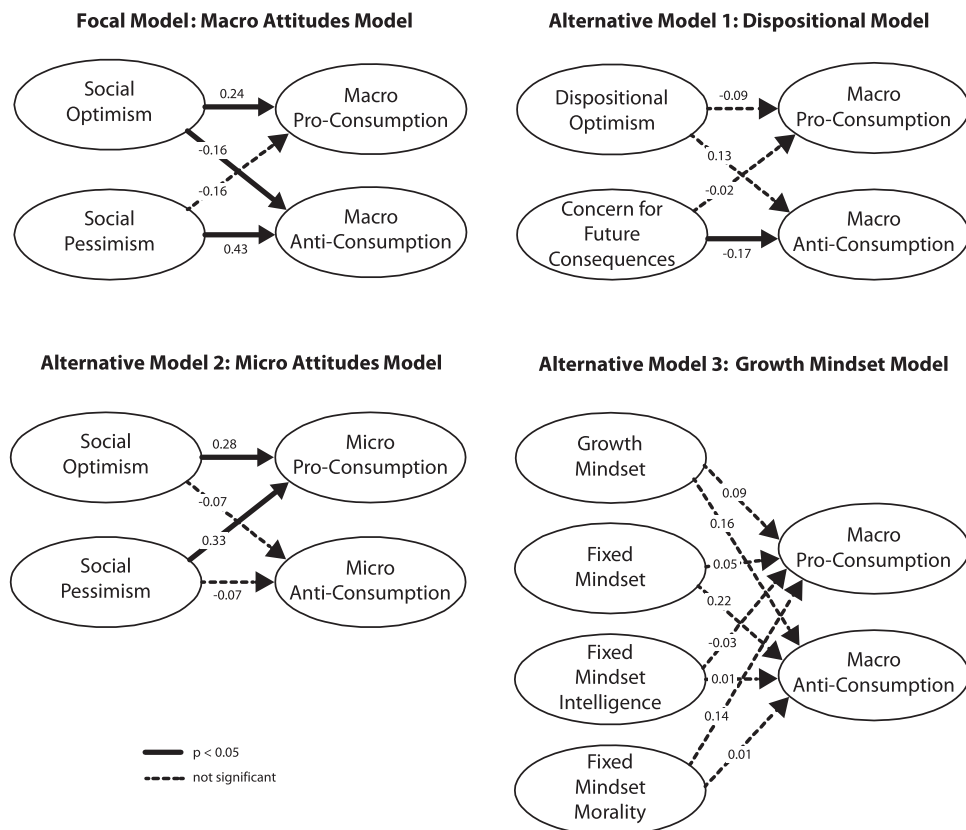
Abbreviations: AIC, akaike information criteria; CAIC, comparison of akaike information criteria; ECVI, expected cross validation index; PNFI, parsimony normed fit index.

well in absolute terms but it also performed well in relative terms. The strength of our findings in our focal model relative to the three alternative models can be seen in Figure 3.

### 10 | IMPLICATIONS AND FUTURE RESEARCH

These results provide strong support for our hypotheses which posit that a substantive contributor to people's macro attitudes towards consumption is the attitudes they hold about society's ability to solve

the problems it faces. Those who think society is facing problems it cannot solve are the ones most likely to become macro anti-consumers. That was the strongest relationship identified in this study (either in the focal model or any of the alternative models). Though not as strong, there was still a notable relationship between people's perception that society can and will solve the problems it faces and their likelihood of becoming pro-consumers. Thus, social optimism and pessimism does appear to impact people's macro attitudes towards consumption. These findings have important implications for anti-consumption research, consumer implicit theory research, and social marketing.



**FIGURE 3** Comparison of results: Focal model versus three alternative models

## 10.1 | Implications for anti-consumption research

An important implication of the current research is that it draws a strong connection between implicit theories in a way that helps explain why people become macro anti-consumers. Macro anti-consumers appear to believe that society is not capable of solving the problems it is creating for itself. With a standardized path coefficient of 0.43, this one belief (social pessimism) did much more to explain people's macro anti-consumption attitudes than did any of the other variables in the focal model or the three alternative models. As tested in the dispositional alternative model, macro anti-consumers did not show a significantly higher disposition towards pessimism. So, at the individual level, macro anti-consumers do not appear to be more pessimistic or fatalistic. They simply hold the implicit theory that society cannot or will not solve the problems it is creating. Also, the data collected for these alternative models was collected along with the data for the focal model. Thus, the strong effect of social pessimism and optimism on macro anti-consumption is not likely due to common method bias. As researchers continue to explore the antecedents and consequences of micro anti-consumption, the impact of social optimism and pessimism must be considered.

It is worth noting that, even though social optimism and pessimism impacts people's macro attitudes towards consumption, they do not necessarily push people to consume less. In the micro attitudes alternative model, we did not find a significant relationship between social pessimism and micro anti-consumption. Thus, it would appear that the macro anti-consumption attitudes that social pessimism creates are more descriptive (positive) beliefs about how the world is than they are prescriptive (normative) beliefs about how people should behave. Social pessimism does not necessarily lead consumers to conclude that they themselves as individuals should consume less. Rather they may simply believe that society will inevitably be overcome by the problems it is facing and one of those problems is overconsumption. Perhaps a difference between micro and macro anti-consumption is that macro anti-consumption attitudes are less important in forming behavioral norms than are micro anti-consumption attitudes. Whether this is so would be an interesting question for future research as we seek to better understand the differences between macro and micro anti-consumption.

## 10.2 | Implications for consumer implicit theory research

As mentioned earlier, there has recently been an increased interest in implicit theories among consumer researchers. Eighty percent of the consumer research studies on implicit theories contrast incremental theorists with entity theorists. Rucker and Galinsky (2016) argue that consumer researchers need to move beyond this narrow focus and look at other implicit theories that affect consumption behavior. Our research indicates the promise of doing so. Due to implicit theory research being dominated by studies which look at growth versus fixed mindsets, we originally explored these variables as well. They

produced no significant results in two large scale studies nor did they produce any significant findings when we tested them in a comparison model in this study (Alternative Model 3). Thus, there is very strong and convincing evidence that entity theorists are no different than incremental theorists when it comes to macro attitudes towards consumption. However, it does not necessarily follow that macro attitudes are not formed and impacted by any implicit theory a consumer may hold. They are just not impacted by those specific implicit theories (e.g., incremental vs. entity).

Rather than rejecting the concept of implicit theories as a possible variable impacting macro attitudes towards consumption, we decided to explore a different set of implicit theories. We chose social optimism and pessimism because they are conceptually closer to why people might develop their macro attitudes towards consumption. When we did, we found that this different set of implicit theories was significantly related to macro attitudes towards consumption. The concept of implicit theories led us to look at social optimism and pessimism. However, we would have never tested these relationships if we only thought of implicit theories in the narrow realm of growth versus fixed mindsets.

Implicit theories are those beliefs held by lay people which fill much the same purpose that explicit theories do for professionals. They help people understand, organize, and make predictions about the world in which they live. They are probably never formally stated or tested. A person may not even be cognizant of the implicit theories that are guiding their behavior. That is why they are called implicit theories. However, these lay theories about the world do appear to have great promise in understanding human behavior. As consumer researchers try to understand a wide variety of topics, it seems useful to look at a wide variety of implicit theories. There seems to be little advantage to restricting implicit theory research in consumer behavior to growth versus fixed mindsets. There would actually be a significant disadvantage for doing so.

## 10.3 | Implications for social marketing research and practice

As stated above, social pessimists are more likely to be macro anti-consumers but not more likely to be micro anti-consumers. This has important implications for social marketing directed at decreasing consumption (e.g., Peattie & Peattie, 2009). It is tempting to think that one way to encourage individuals to consume less is to convince them that society's current level of consumption is creating problems that are too big to be solved. Doing this would likely create more social pessimists which in turn might lead to more negative macro attitudes towards consumption. However, people's decision to buy less occurs at the micro level. To effectively change people's level of consumption, social marketers need to target micro anti-consumption attitudes. The current research showed that employing the concept of implicit theories is very useful for understanding macro consumption attitudes. It is likely that there might be other implicit theories which could impact people's micro attitudes towards

consumption. The focus of the current research was on macro attitudes towards consumption. Research similar to that presented here, except that it focuses on micro attitudes towards consumption, might be useful for social marketers seeking to reduce consumption. However, the key would be finding the right implicit theory.

## 11 | LIMITATIONS

There are three main limitations to the current study which should be noted. The first is that the findings are correlational and thus causality has not been established. Our focal model posited that there exists a causal path from social optimism and pessimism to macro attitudes towards consumption. However, though the correlational data showed a strong relationship, it did not firmly establish which direction that relationship was. It is possible that macro attitudes towards consumption lead to social optimism and pessimism. That explanation seems less plausible than the one we presented in our focal model but the possibility was not excluded based on the cross-sectional data we had. Second, this data was collected from a convenience sample. Our sampling goal was to acquire a demographically diverse adult sample and we accomplished this. However, we were not able to make any point estimates in the general population and the exact coefficients we found might differ with a representative sample. Third, since social optimism and pessimism were measured in a very different way than has been measured in the past, the results may not be comparable to previous research on these constructs. Our conceptual definitions of these constructs are the same as in previous research but our operational definitions are quite different.

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