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Consumers' Perceptions of Product Coolness Across Three
Cultures**

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What Makes a Product Cool?

Consumers' Perceptions of Product Coolness Across Three Cultures

Abstract

Coolness is an increasingly important factor for products to succeed in today's global markets. The literature lacks a deep understanding of consumers' interpretations of product coolness across cultures and the factors that explain variations in those interpretations. The authors use two studies (with Anglophone consumers) to conceptualize product coolness. They then conduct two cross-cultural surveys in cultures that use the English word "cool" in everyday language to test an integrative framework of coolness. The framework replicates across the sampled cultures (with U.S., German, and Chinese consumers). Major findings are: (1) Consumers universally interpret coolness in two largely distinct ways: a product is cool if it generates excitement or admiration *(Personal Interpretation of Coolness)* or if its appeal is socially validated (*Social Interpretation of Coolness)*, with the former interpretation being generally more pronounced. (2) These interpretations universally correlate with distinct sets of product attributes often associated with coolness and with desirable and undesirable coolness-related outcomes. (3) Robust cross-cultural variations emerge, with Chinese consumers subscribing to the Social Interpretation, relying on *exclusivity* as a coolness driver, and desiring cool products to a larger extent than U.S. and German consumers. This finding can be explained primarily by Chinese consumers' stronger tendency towards *Ascription*.

Keywords: coolness, product, cross-country, cultural values

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INTRODUCTION

Deeply rooted in U.S. history and culture, the concept of 'coolness' has become highly relevant to global consumer culture (Bagozzi and Batra 2025, Belk, Tian, and Paavola 2010, Warren et al 2019). Being cool can be a key driver for new products' success in global markets. So, marketers around the world strive to create and sell 'the next cool thing' (Bird and Tapp 2008, Sundar, Tamul, and Wu 2014). But what do global consumers find 'cool' in a product? To what extent does coolness represent a universally shared concept and how do cultural factors impact what consumers mean by 'cool'? These questions are critical both theoretically and managerially (Warren et al 2019). Their answers have important implications for better understanding product coolness as a global phenomenon and for designing and commercializing products whose coolness appeal is enhanced by local cultural values.

Marketing research on coolness has been steadily advancing, and offers preliminary insights into those questions. However, an integrative understanding of product coolness in a cross-cultural context is lacking. Researchers generally agree that coolness represents a complex and, to a certain extent, difficult-to-define construct (Holtzblatt et al 2010, Warren et al. 2019). As a result, coolness research has primarily focused on the conceptualization and the operationalization of coolness (e.g., Bagozzi and Batra 2025, Im et al 2015, Loureiro et al 2020, Sundar et al 2014, Rahman 2013, Warren et al. 2019, Warren and Campbell 2014), with an emphasis on identifying the collection of attributes that make a brand or product cool. A comparatively smaller subset of studies has investigated the market outcomes of coolness (e.g., Bagozzi and Khoshnevis 2022, Feng et al 2024, Kim and Park 2019, Suzuki and Kanno 2022).

Several characteristics of this research stand out. First, most studies examine coolness as a brand-level phenomenon (e.g., Nancarrow et al 2002, Warren and Campbell 2014, Warren et al 2019), as opposed to a more general, product-level phenomenon (e.g., Sundar et al 2014). Second, despite the global applicability of the coolness construct, the vast majority of coolness

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research is conducted in a mono-cultural context, with only four studies employing a multicultural context (Belk, et al 2010, Ferguson 2011, Sundar et al 2014, Warren et al 2019; see Table 1 and Web Appendix A for an overview).

< insert Table 1 about here >

Existing multicultural research suggests that perceptions of 'cool' are a combination of universal and cultural influences (Belk et al. 2010, Ferguson 2011, Warren et al. 2019). The focus is largely on exploring the universal aspect of coolness, using qualitative research methods. Ferguson (2011)'s qualitative inquiry finds that young consumers in Anglophone countries (the U.S., the U.K., and Ireland) universally consider bungy jumping 'cool,' but disagree on what makes an experience 'cool.' Warren et al. (2019), in an exploratory study, uncover a stable nine themes that reflect the component characteristics of brand coolness among North American and European consumers (e.g., extraordinary/useful, aesthetic, energetic, high status, rebellious, original). Sundar et al. (2014) demonstrate that a three-factorial structure of coolness, comprising attractiveness, originality, and subcultural appeal, is culturally-invariant across US, Korean, and Chinese consumers. Belk et al (2010) is the only paper that investigates both universal and culturally-specific aspects of coolness, by qualitatively examining what types of products and activities young American versus Finnish consumers consider cool.

Overall, the multicultural studies on coolness provide insights into some of the commonalities and variations related to coolness. However, the role of culture is not formally tested or linked back to consumers' fundamental conceptualizations of coolness and to the different product attributes and outcomes associated with coolness. The present research aims to fill these gaps in the literature. To our best knowledge, this represents the first and only study that examines product coolness in a cross-cultural context by empirically assessing the impact of cultural values on customers' perceptions of coolness. Specifically, we address the following questions. (1) How do Anglophone consumers interpret the meaning of product coolness, and

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how do those interpretations correlate with product attributes typically associated with coolness and with desirable and undesirable coolness-related outcomes? (2) To what extent are the multiple interpretations of product coolness and their associated product attributes and coolness-related outcomes universal versus culturally dependent? (3) What cultural factors may account for any observed cross-cultural variations?

Our research builds on the assumption that the meaning of coolness is universal, though its manifestations are culturally dependent. There is a universal duality at the center of the coolness construct (e.g., Ferguson 2011). One facet of this duality is the Personal Interpretation of Coolness (PIC), which posits that certain products are cool primarily because of their intrinsic benefits. Robotic vacuums or AI-based assistants, which have delighted consumers worldwide with an unprecedented sense of convenience and wonder, provide PIC-based examples. The other facet is the Social Interpretation of Coolness (SIC), which posits that certain products are cool primarily because of their socially-validated benefits. Viral products such as fidget spinners or aspirational products such as designer heritage bags serve as a SIC-based examples.

This universal PIC versus SIC duality can explain why coolness is invariably linked to certain product attributes (e.g., aesthetics, exclusivity; Jimenez-Barreto et al. 2022; Runyan et al. 2012) and to positive, but also negative, outcomes (i.e., cool products are seen as desirable, but also subject to stereotypes; Nancarrow et al 2001, Klein 200). We formalize these links as part of an integrative framework for product coolness, in which the various relationships between elements are universal, but their weights are culturally-dependent.

To derive and test this framework, we use two surveys (Studies 1A and 1B) to first conceptualize product coolness among U.S./U.K.-based respondents (representing Anglophone cultures). We then conduct two cross-cultural surveys (quasi-experiments Study 2 and Study 3) to test the extent to which the Anglophone conceptualization of coolness (and its linkages to other constructs) replicates in a multicultural setting. For that, we collect data from three major

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cultures that use the English word 'cool' in everyday language: the U.S, Germany, and China. We find robust commonalities, as well as differences, in the three cultures' interpretations of coolness (and their linkages to other constructs), and attempt to explain those differences via theoretically derived cultural variables. Specifically, we show how certain differences observed between cultures (i.e., perceptions of exclusivity being more closely associated with coolness in China than in the U.S. or Germany) can be linked back to specific cultural values (i.e., a higher emphasis on Ascription in China), based on differences in consumers' preference for the social versus personal interpretation of product coolness.

The rest of the paper is organized as follows. Section two elaborates on the theoretical background and derives the research propositions and hypotheses. Section three presents the research design, empirical analyses, and findings. Section four discusses the findings, theoretical and managerial implications, limitations, and directions for future research.

THEORY DEVELOPMENT

Product Coolness

Our research focuses on coolness in the context of a product, as opposed to a brand, the latter of which has been extensively examined in previous studies (see Web Appendix A). By 'product,' we refer to a physical object or non-physical service. Perceptions of brand coolness are directly tied to a brand's perceived image or personality (Warren and Campbell 2014, Warren et al. 2019). In contrast, perceptions of product coolness typically stem from a product's intrinsic and extrinsic attributes or value, which are frequently observable.

We focus on product coolness for two main reasons. First, coolness is clearly a category-related construct. Common sense suggests that certain product categories are intrinsically cooler than others, e.g., electric cars, AI-based software, VR glasses, versus toilet paper or kitchen cling film. So, attaching a so-called 'cool' brand to certain 'uncool' product categories (e.g.,

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Apple-branded toilet paper) does not necessarily turn such products into something cool. In other words, brand coolness represents only a subset of the coolness phenomenon that can be investigated through the lens of product coolness. Second, studying product coolness provides firms with better insights into how to create winning products. Since brands are symbolic constructs built on consumers' inferences, focusing on the personality-like trait of brand coolness (Feng, Xu, and Wang 2024, Warren et al. 2019) inevitably shifts a firm's strategic focus from product innovation to communication. However, products can more easily achieve sustained success by possessing compelling new benefits instead of relying solely on effective communications. The quick global adoption of "smart" products or technologies serves to illustrate this point. For example adding wireless connectivity to devices (focused on convenience) or integrating red light therapy into skincare products (focused on health benefits) can immediately increase the coolness factor of a product regardless of its brand. Given these reasons, we focus on product instead of brand coolness in this study.

Dual-Route Interpretation of Product Coolness

Coolness represents a complex and versatile phenomenon (Dar-Nimrod et al 2012, Ferguson 2011, Pountain and Robins 2000), whose actual manifestation is best conceptualized on a multi-attribute basis (Sundar et al. 2014, Warren et al. 2019). Perhaps the most specific, evidence-based definition of coolness comes from Warren and Campbell (2014, p. 544), who define coolness as being "*a subjective and dynamic, socially constructed positive trait attributed to objects inferred to be appropriately autonomous*." Consistent with Warren et al. (2019), we adopt the above as our working definition of coolness.

This definition places the concept of *bounded autonomy* at the core, implying that a cool product needs to be different and stand out, but do so in a way that is positive and socially appropriate. Importantly, the definition juxtaposes the socially constructed nature of coolness perceptions (i.e., coolness requires a social validation mechanism) against the individual

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subjectivity involved in such perceptions (i.e., something is deemed as cool only if an individual sees it as such, Pountain and Robins 2000).

Building on this definition, which suggests an inherent duality in the coolness concept, we propose that product coolness can be interpreted via dual routes: social versus personal. Each offers a distinct pathway through which a product can positively differentiate itself from others, as further described below. This distinction is also consistent with Ferguson (2011), who identifies two motivations tied to the consumption of a specific 'cool' activity: an intrinsic (personal) and an extrinsic (social) one, which can sometimes operate at odds with each other.

Social Interpretation of Coolness (SIC). The socially-focused interpretation suggests that a product's coolness is an externally bestowed or validated benefit requiring the consensus and participation of an audience. In other words, coolness perceptions are communal, such that what one person thinks is cool is partially based on what other people think is cool (Gerber and Geiman 2012, Sundar et al 2014). Coolness hence operates similarly to other socially constructed traits that are highly desirable and require social validation, such as status or popularity (Hollander 1958). Similar arguments suggest that coolness arises from a product's association with a group of cool or trendsetting people, which creates subcultural appeal (e.g., Li et al. 2021, Kim, Shin and Park 2015, Sundar et al. 2014). Once the coolest consumers—i.e., the 'cultural intermediaries' (Bourdieu 1984)—adopt a particular product, others will imitate such behavior, validating the product's coolness and further enhancing its social desirability (Nancarrow et al 2002). This social validation process is often bound by time: as soon as a product becomes mainstream, it inevitably starts losing some of its cool (Belk et al 2010) or transitions from 'niche' to 'mass' coolness (Warren et al 2019). Hence, SIC suggests that the consumption of cool products is driven by extrinsic motivations, centered around projecting a favorable self-image, often via conspicuous and timely consumption practices (Ferguson 2011).

Personal Interpretation of Coolness (PIC). Another perspective on product coolness

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focuses on an individual's personal judgment of a product, especially in the context of a consumption experience. Consuming is "significantly an autotelic activity in which tastes are formed around the desires for and pleasures gained from particular goods and activities relative to others" (Holt 1998, p 3). Therefore, coolness perceptions are governed by an individuals' appreciation of a product's inherent value, in the absence of any social cues or external validation (e.g., Belk et al 2010, Dar-Nimrod et al 2012, Ferguson 2011). While social norms can create boundaries around what an individual may or may not consider cool (Warren and Campbell 2014), the consumer is ultimately in charge of making the coolness judgment based on a product's ability to provide valuable features and fill a genuine need (Mourdoukoutas 2013). This interpretation suggests that the consumption of cool products is driven by intrinsic motivations, centered around experiencing excitement or a sense of achievement, for the sake of the consumption experience rather than the image it portrays (Ferguson 2011).

In summary, our theoretical development points towards two distinct interpretations of product coolness: a socially constructed and validated assessment of a product's image (*SIC*) and a personal interpretation based on the product's perceived attributes, satisfying individual needs and preferences (*PIC*). The two interpretations are not mutually exclusive: personally-derived judgments of coolness cannot be completely divorced from social influences and socially-derived perceptions of coolness may sometimes draw from the inherent value of a product's attributes (Ferguson 2011). Given the Anglophone origin of the coolness construct, and the prevalence of Anglophone research on coolness, we develop our propositions and hypotheses regarding the interpretations of coolness primarily in an Anglophone context. We hence propose that:

P1: **Anglophone consumers interpret product coolness in two largely distinct ways: a product is cool if it provides some type of personal value to the consumer (i.e., *PIC*) or if its appeal is socially validated (i.e., *SIC*).**

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Research has shown that perceptions of coolness are tied to various product attributes. Several such attributes—such as having an exclusive, high-end image (Nancarrow et al 2002, Pountain and Robins 2000, Warren et al 2019) or being stylish or aesthetically appealing (Belk et al 2010, Sundar et al 2014, Warren et al 2019)—are largely associated with social cues and external consumption motivations. Those attributes may contribute to coolness perceptions in products due to the social benefits they provide. This favors the *SIC*-based interpretation of coolness. By contract, product attributes such as reliability (Attiq et al. 2022, Tiwari et al. 2021), performance (Belk et al. 2010), or usefulness (Li et al. 2021, Kim and Park 2019) provide benefits that are mostly intrinsic to the consumption experience. Hence, consumers may see such products as cool, at least in part, based on the personal enjoyment, admiration, or value they derive from using those products. This favors the *PIC*-based interpretation of coolness. In sum, different types of product attributes may engage different interpretations of coolness. Of course, since certain attributes such as aesthetics provide both intrinsic and extrinsic value to consumers (Wu et al. 2023), one can expect a certain overlap between the types of product attributes related to *PIC* vs. *SIC*. Within an Anglophone context, we hence propose that:

P2: For Anglophone consumers, *PIC* versus *SIC* correlate with distinct but overlapping sets of product attributes often associated with coolness.

Consistent with the notion that coolness represents a positively-valenced evaluation, research has consistently shown that cool brands or products are associated with a host of positive consumer- and market-relevant responses. Examples include positive effects on consumer preferences (Feng et al 2024), purchase intentions (Feng et al 2024, Kim and Park 2019, Lu et al 2021, Suzuki and Kanno 2022), word-of-mouth (Bagozzi and Khoshnevis 2022), satisfaction (Nan et al 2022), willingness-to-pay (Koskie and Locander 2023), and brand relationships (Amenuvor et al 2023, Jimenez-Barreto et al 2022). We assume that product coolness leads to positive outcomes either via the PIC or the SIC route, depending on the type

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of benefits consumers associate with a specific cool product.

At the same time, research has also linked coolness to negative consequences. Specifically, one may perceive cool products as being fads and may ascribe superficiality to consumers who opt for such products (Nancarrow et al 2002, Klein 2001). Such negative inferences or stereotypes are most likely to emerge in conspicuous product consumption contexts (Ferguson 2011). They are often driven by the perceived incompatibility between experiences of coolness that are purely internally-driven (and hence intrinsically rewarding) and those that are externally-driven (and hence dependent on social validation; Ferguson 2011). We therefore assume that coolness is likely to trigger negative stereotypes when the social interpretation route is (hyper-)activated. Within an Anglophone context, we propose that:

P3: For Anglophone consumers, the *PIC* versus *SIC* interpretations of coolness differentially predict desirable versus undesirable coolness-related outcomes.

The structure of the proposed integrative framework for product coolness, which builds on Propositions P1-P3, is presented in Figure 1 (Section A).

< insert Figure 1 about here >

The Culturally Universal Aspect of Coolness Interpretations

To probe how culture impacts which interpretation consumers intuitively resort to when forming perceptions of product coolness, we adopt the definition of culture proposed by Kroeber and Kluckhohn (1952) and endorsed by many cultural psychologists (see Morling and Lamoreaux 2008). It describes culture as consisting of "explicit and implicit patterns of historically derived and selected ideas and their embodiment in institutions, practices, and artifacts" (Kroeber and Kluckhohn 1952, p. 357). Since this definition posits that culture can be expressed via artifacts—which necessarily include consumption objects—it is relevant to our research on product coolness.

We acknowledge that somewhat different predictions about the cultural variability of

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coolness can be made, depending on which perspective one adopts. The first perspective involves interpreting mass consumption through the lens of globalization. As consumption-related symbols and meanings are increasingly shared by users around the world (e.g., Attiq et al 2022, Bookman and Hall 2019), national and cultural differences have become less important in consumption contexts. The 'cool' aspect of consumption arguably follows the same pattern, since what counts as cool in one place can quickly spread to and get adopted in other parts of the world. The findings that consumers in different cultures show substantial commonalities in the types of products or activities they consider cool (Belk et al. 2010, Brown 2021, Ferguson 2011) point towards a culturally shared understanding of 'cool.' We expect this understanding to also extend to the relationships between coolness and the other elements in our integrative framework, especially in cultures that have borrowed the literal term 'cool' from English. That is to say, the structure of the integrative framework for product coolness universally links *PIC* and *SIC* to coolness-related product attributes, and to desirable and undesirable coolness-related outcomes. We hence propose that:

P4: The structure of the integrative product coolness framework is culturally-invariant.

The Impact of Cultural Values and Coolness Interpretations

As a complement to the globalization perspective, existing research suggests that, despite some universal aspects of coolness, culture nevertheless impacts what consumers consider cool (Belk et al. 2001). We posit that culture exerts a noticeable influence on consumers' interpretations of product coolness via different mechanisms and develop hypotheses regarding the impact of specific cultural values.

First, culture is likely to affect coolness perceptions by activating either the social or the personal route to consumers' coolness interpretations. Cultural values that dictate what roles an individual is expected to play in a society or through what mechanism one may achieve

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desirable social goals are most likely to influence which interpretation of coolness consumers naturally gravitate towards. For example, consumers from cultures that value a socially-driven identity (Hui et al 1991, Oyserman et al 2002) may gravitate towards the social-based interpretation of coolness more than consumers from individuality-driven cultures.

Second, culture affects how individuals express their cultural capital through the choice and display of certain consumption objects. As sociologists and social anthropologists argue, people acquire particular consumption objects as status markers (Holt 1998, Warner et al 1949) and to express their cultural capital, which secures the respect of others (Bourdieu 1984). Cool products, representing a particular form of cultural capital (Thornton 1995), become positional markers to reinforce status boundaries (Warner et al 1949). This is especially true in collectivistic cultures such as China (Oetzel and Ting-Toomey 2003), where 'face'—the status earned in a social network—is highly valued and products suitable for conspicuous consumption are coveted status markers (Atsmon et al 2011). Given that coolness and status-signaling through social display are closely linked for certain consumers (Ferguson 2011), it follows that products with status-signaling qualities (such as exclusivity) are more easily conducive to coolness perceptions in certain cultures versus others[1].

For the hypothesis development, we surveyed existing cross-cultural research to identify a set of values/dimensions that can explain potential cultural differences related to product coolness. We focused largely on elements from Hofstede's cultural dimensions (1980), Schwartz's cultural value theory (Schwartz 2013), and Trompenaars's seven cultural dimensions (Trompenaars and Woolliams 2002), all of which represent widely-adopted frameworks for cross-cultural studies in global marketing and management. Among the multitude of cultural values (and their available scales), we selected five values that appear

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[1] While the relationship between coolness and the remaining product attributes in our framework may be subject to cultural influences as well, those linkages cannot be as clearly conceptualized a priori. Hence, we focus our hypotheses only on exclusivity as a coolness driver.

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highly likely to impact how consumers from different cultural backgrounds interpret the meaning of product coolness and the product attributes and consequences associated with coolness. Below we describe the selected values and the rationale for choosing them.

Individualism vs. Collectivism. This cultural dimension reflects a social pattern that gives priority either to one's personal goals over the goals of others or vice versa (Yoo, Donthu, and Lenartowicz 2011). Individualistic cultures orient towards the self (i.e., "I-conscious") whereas collectivistic cultures orient towards the group (i.e., "we-conscious," see Nisbett et al 2001). Specifically, in individualistic cultures, such as the U.S. or Germany, prevalent cultural norms include independence, self-sufficiency, and individually-based self-identity. In collectivistic cultures, such as China, Japan, India, or Mexico, prevalent cultural norms include affiliation, cohesion, interdependence within clans and/or extended families, and socially-based identity (Hui et al 1991, Oyserman et al 2002). *Individualism/Collectivism* is relevant to coolness perceptions as coolness is socially constructed. Additionally, consumers often perceive products as cool when others, especially opinion leaders or 'cool' people, also consider them cool (Sundar et al. 2014). Hence, the coolness perceptions of individuals living in collectivistic cultures are more likely to be driven by *SIC* rather than *PIC*. Additionally, in collectivistic cultures, product attributes closely related to the notion of "we" (such as *exclusivity*, whose value is intrinsically related to social constructs such as status or peer opinion) likely play in outsized role in driving coolness perceptions. So, we hypothesize that:

H1a: There is a positive relationship between *Collectivism (vs. Individualism)* and the *Social Interpretation of Coolness (SIC).*

H1b: There is a positive relationship between *Collectivism (vs. Individualism)* and perceptions of *exclusivity* as drivers of product coolness.

Intellectual Autonomy vs. Embeddedness. Somewhat similar to *Individualism/Collectivism*, this dimension suggests that in cultures that value embeddedness,

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the focus is on sustaining social order and retaining tradition, by prioritizing security and obedience. In cultures that focus on intellectual autonomy, individuals have control over their choices and are encouraged to independently pursue ideas and thoughts (Schwartz 2013). To the extent that coolness is associated with autonomy and rebellion (Warren and Campbell 2014), consumers from cultures that favor intellectual autonomy are more likely to see product coolness as individually- rather than socially-determined. Hence, we hypothesize that:

H2: There is a positive relationship between *Intellectual Autonomy (vs. Embeddedness)* and the *Personal Interpretation of Coolness (PIC).*

Short-Term vs. Long-Term Orientation. This dimension captures the difference between cultures that value a future focus (long-term orientation) versus a focus on the past and present (short-term orientation). In long-term orientated cultures, individuals value virtues such as perseverance, saving, and thrift. In short-term oriented cultures, they tend to focus on quick results, immediate gratification, and spending (Hofstede, 2001, Hofstede and Minkov 2013, Yoo et al. 2011). Although it is not immediately clear how this cultural dimension affects whether *PIC* or *SIC* is the more pronounced interpretation, we expect it to influence which product attributes are more important in shaping coolness perceptions. Specifically, *exclusivity* is likely to play a weaker role in shaping coolness perceptions in cultures that value perseverance and thrift. Therefore, we hypothesize that:

H3: There is a positive relationship between *Short-Term (vs. Long-Term) Orientation* and ratings of *exclusivity* as drivers of product coolness.

Indulgence vs. Restraint. This represents a newer dimension in Hofstede's cultural model, somewhat related to *Short-/Long-Term Orientation*. A culture that favors indulgence allows relatively free gratification of human drives related to enjoying life and having fun; a more restrained culture suppresses such gratification and regulates it by means of strict social norms (Ein-Gar and Sagiv 2014, Hofstede and Minkov 2013). Indulgent cultures tend to focus

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more on individual happiness and well-being, allow greater freedom and personal control, and place a relatively higher importance on leisure. Since coolness functions as a form of cultural capital and implies positive feelings such as excitement, it may resonate well with indulgence-oriented cultures. In such cultures, coolness perceptions are more likely to be dominated by *PIC* but also shaped by symbolic product attributes such as *exclusivity*. We hence hypothesize that:

H4a: There is a positive relationship between *Indulgence (vs. Restraint)* and the *Personal Interpretation of Coolness (PIC).*

H4b: There is a positive relationship between *Indulgence (vs. Restraint)* and perceptions of *exclusivity* as drivers of product coolness.

Ascription vs. Achievement. This cultural dimension implies that in achievement-oriented cultures (e.g., the U.S., the U.K., Germany) an individual earns status through so-called 'internal' or 'intrinsic' qualities such as competence, skill, or performance. In ascription-based cultures (e.g., China, India, Japan), status is bestowed on an individual based on his or her family background and other nominal, conspicuous characteristics (Smith, Dugan, and Trompenaars 1996). In the latter type of culture, people may have a greater tendency to own cool products to gain or express a certain status. In other words, cultural capital is even more valuable in serving as a status marker (Bourdieu, 1984). In such a culture, coolness perceptions are more likely to be shaped by *SIC* and by purely symbolic product attributes such as *exclusivity* than by functionality-oriented attributes. Therefore, we hypothesize that:

H5a: There is a positive relationship between *Ascription (vs Achievement)* and the *Social Interpretation of Coolness (SIC).*

H5b: There is a positive relationship between *Ascription (vs. Achievement)* and perceptions of *exclusivity* as drivers of product coolness.

Figure 2 illustrates the integrative conceptual framework for our research, including the framework elements for which we expect culture to play a predictor role (H1-H5).

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EMPIRICAL STUDIES

We employ four studies to answer our research questions, as detailed below.

Study 1A (Pilot Study): Exploratory Investigation into the Meaning of Product Coolness

Study 1A is an exploratory inquiry to develop some preliminary insights into our first research question: how do (Anglophone) consumers interpret the meaning of product coolness? We use a survey with open-ended questions, drawing on student samples from two cultures: 208 respondents from the U.S. and 177 respondents from the U.K. Using consumers from multiple cultures as a starting point for the investigation is consistent with the approach employed by Warren et al (2019). The purpose is to help develop a conceptualization of product coolness that is robust across Anglophone cultures.

Respondents were first asked to think of examples of cool products and then indicate (a) their definition of product coolness (i.e., "How do you define product 'coolness'?") and (b) the determinants that trigger a product's coolness (i.e., "When do products start to be cool?"). Two trained coders manually coded the responses, with high inter-coder reliability (Cohen's Kappa = .82). Web Appendix B provides full details of the study methodology and results.

Briefly, this preliminary investigation of product coolness reveals a pattern that is robust across the two samples. While respondents across both cultures fail to articulate a clear definition of the meaning of coolness, the vast majority adopt a consistent strategy for defining coolness: using specific product attributes as a basis for the definition of coolness, particularly design/style/visual attractiveness, uniqueness/novelty/ creativity, usefulness/practicality, ease-of-use, and aspirational image/exclusivity. Concerning the more general determinants of coolness (i.e., "When do products start being cool?"), we again see relatively consistent patterns across the two cultures. Specifically, the responses fall into one of four broad categories. Two

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categories tap into the personal interpretation of coolness, i.e., coolness stems from (a) the presence of intrinsically desirable product characteristics or from (b) its ability to fulfill or satisfy a consumer need. The remaining two categories reflect the social interpretation of coolness, i.e., (c) coolness stems from the social validation associated with the product, or from the (d) value bestowed on the product through marketing or branding activities).

We differentiate between the personal and social interpretation by labeling them *PIC* (*Personal Interpretation of Coolness*) versus *SIC* (*Social Interpretation of Coolness*). The robust findings across the U.S. and U.K. samples in response to the two open-ended questions suggest that our approach for investigating consumers' interpretation of coolness has good ecological validity. Given the similarity between the U.S. and U.K. samples, the next study focuses solely on the U.S. as a representative of Anglophone cultures.

Study 1B: Measurement & Cross-Sample Validation for Product Coolness Interpretations

Using the insights generated in Study 1A, in Study 1B we develop scale items for assessing the potential interpretation(s) of product coolness and validate them via a comparison between two respondent samples. We also use the scale items to preliminary explore whether *PIC* and *SIC* reflect two fundamentally different perspectives on coolness, associated with different product attributes and marketing-relevant consequences. We include samples from two populations. The first includes 136 undergraduate students from a large U.S. university (52% females; median age group: 18-22; median parents' annual income $100,000 – $200,000), who participate in the study for course credit. The second is a general population sample of 248 participants recruited via Amazon Mturk (59% females; median age group: 31-35; median annual income $20,000 – $50,000), who participate in exchange for a cash remuneration[2].

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[2] The second sample was selected to be demographically representative of the U.S. population as possible, based on the 2009 US census data.

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To measure coolness interpretations, we first prompt respondents to provide examples of cool products. We then ask them to indicate, on a scale from 1 (not at all) to 7 (extremely), their agreement with the statement: "A product is cool when …" To complete this statement, we use a pool of 23 items generated from the exact phrases used by the participants in Study 1A when indicating when a product starts being cool. In order to minimize yay-saying (e.g. Tellis et al. 2009), some of these items are positively framed (e.g., "[A product is cool when] it appeals to my personal taste"), and some are negatively framed (e.g., "[A product is cool when] it does not excel on any of its features"). The items are shown in random order.

Since the results of Study 1A reveal that consumers' conceptualization of product coolness is intricately linked to a series of *product attributes* associated with coolness, we also measure several coolness-related attributes that directly build on the product features identified in Study 1A. Based on a CFA designed to elicit a robust solution across the two samples, the final set of product attributes, which are distinct from each other, includes *usefulness/usability* (α's =.85 and .88 in the two samples), *exclusivity (α's =*.78 and .71), and *aesthetics (α's =*.76 and .79), see Figure 1 Section A for the full list of items[3]. These are not meant to represent an exhaustive list of all the product attributes that can be associated with coolness. Rather, we focus on attributes that are consistent with other research on coolness, distinct from each other, highly rated, and representative of both functional and symbolic/hedonic product features (e.g., Homburg, Schwemmle, and Kuehnl 2015). We aim to show that these attributes form a pattern that is differentially related to PIC versus SIC.

We additionally measure a series of *coolness-related outcomes*. Since being cool is

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[3]   For the sake of conceptual clarity and brevit, we choose to exclude several attributes. Those include: *quality* (because it is too broad to map onto a specific product feature) and *trendiness/popularity* (because it conceptually overlaps with several items assessing SIC). We also exclude *uniqueness/novelty/creativity*, because it is conceptually very close to the notion of bounded autonomy (Warren and Campell 2014)—which represents the basis for the definition of coolness we are using in this study—and because previous research has identified novelty as a necessary prerequisite for coolness (see Im, Bhat, and Lee 2015).

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strongly related to being aspirational and desirable (Dar-Nimrod et al 2012, Neumeister 2006, Sundar et al 2014), we include a measure for the *desirability of cool products (*α's = .79 and .80). Additionally, since consumers sometimes make negative inferences about coolness (Nancarrow et al 2002, Klein 2000), we include a measure of the *negative stereotypes* most commonly associated with cool products and their users (α's = .64 and .50), see Figure 1 Section A for the full list of items for each measure.

First, when it comes to the *interpretations of coolness*, an EFA with Direct Oblimin rotation on the pool of 23 initial scale items yields a two-factor solution (*PIC* vs. *SIC*) that is stable across the two samples. It contains a total of 10 final items (four for *PIC* and six for *SIC*; see Web Appendix C for factor loadings). Specifically, respondents view a product as cool if it has certain product attributes that trigger admiration or anticipated excitement (i.e., *PIC*, *α's* = .80) or if it is popularly accepted as cool or associated with a cool/aspirational reference group or brand (i.e., *SIC*, *α's* =.91 and .93). Figure 1 provides a complete list of items used for the *PIC* and *SIC* scales in Studies 1B, 2, and 3. The two factors are statistically distinct, and consumers subscribe to *PIC* more strongly than to *SIC* across samples (see Web Appendix C).

Second, we obtain preliminary evidence that consumers' *tendency towards PIC vs. SIC* (which we calculate by subtracting *SIC* scores from *PIC* scores) is related to the extent to which consumers associate product coolness with: (a) symbolic attributes such as *exclusivity* or *aesthetics,* (b) functional attributes (such as *usefulness/usability*), and (c) *negative stereotypes* against cool products (see Web Appendix C).

We further validate the results from this study via an additional, experiment-based study, showing the following. First, *perceptions of coolness* can be successfully distinguished from related constructs such as *attitudes/liking* or *desirability*. Second, the items we use to measure *PIC* map well onto the high-arousal emotions of *excitement* (see Im et al. 2015) and *admiration.* This mapping confirms that these two emotions represent key components of *PIC*.

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Full details of the study's methods and results are available from the authors.

Study 2 investigates whether the pattern of results from Studies 1A and 1B can combine into an integrative framework of product coolness that replicates across cultures.

Study 2: Cross-Cultural Examination of the Product Coolness Interpretations

The purpose of Study 2 is to test the underlying structure of our integrative framework for product coolness. The framework posits that, in an Anglophone context, coolness has two distinct *interpretations* (*PIC* versus *SIC*, proposition P1) that are differentially linked to various *coolness-related product attributes* (P2) and *positive* and *negative coolness-related outcomes* (P3). We then test whether the structure of this framework replicates from the U.S. (as a representative of Anglophone cultures) to other cultures, namely China and Germany (P4). We also explore potential cross-cultural differences.

The choice of cultures in our research is strategic. First, consumers in both Germany and China extensively use the English word 'cool' in everyday language, which suggests that they may subscribe to an Anglophone conceptualization of coolness. In German, 'cool' is the most frequently used word for expressing coolness, with a heavier usage than more informal German terms such as 'laessig' or 'geil' (Schmoll 2022). Similarly, in Chinese, the word '酷 (kù)' represents the transliteration of 'cool' and is largely used in casual conversations. Second, the U.S. and Germany on the one hand, and China on the other hand, represent distinct sets of cultures, each embodying certain prototypical Western versus Eastern values. They also represent major cultural hubs for each continent, e.g., Germany for Germanic regions (including Austria, Netherlands, the Scandinavian countries, and parts of Switzerland and Belgium), and China for the Confucian cultural circle (including Japan, Korea, Vietnam, and many Southeast Asian countries). Third, all three cultures represent major world economies, namely the largest in the North American, European, and Asian continent, respectively. The focus on cultures that are key representatives for wide portions of three continents, both economically and culturally,

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makes the insights derived from the present research broadly applicable to companies aiming to develop winning products at the global level.

Method. Using an online panel administered and quality-controlled by Qualtrics, we collect data from German and Chinese respondents, who participated in the study in exchange for compensation. The German sample includes 136 participants (48.5% females, median age group: 31 – 35; median annual income: $25,000 – $100,000) drawn from Germany. The Chinese sample includes 141 participants (36.2% females, median age: 31 – 35; median annual income: $10,000 – $15,000) drawn from China. We compare these two samples with the U.S. sample from Study 1B. To ensure translation accuracy, all measures used for the German and Chinese sample were translated into the respective language by a native speaker (who is not an author on this paper) and then back-translated into English by another native speaker.

Results–Dual Factorial Structure of Coolness Interpretations. A Confirmatory Factor Analysis (CFA) using SEM (IBM SPSS AMOS 26) indicates a two-factor structure for the product coolness interpretations, which replicates well across the three samples (χ^2/df = 3.04, CFI = .93, GFI = .88, RMSEA = .063). This provides support for P1 (for the U.S.) and a portion of P4. The relationship between the two factors varies somewhat across cultures. In the U.S., *PIC* and *SIC* are not correlated (r = -.04, p = .59), while in Germany and China they have a moderately strong correlation ($r's$ = .35 and .65, respectively, $p < .001$, see Figure 1 Section B).

Results–Integrative Framework. We use SEM to test a model that connects each *coolness interpretation* to the *product attributes* identified in Study 1B and the *coolness-related outcomes*. The model provides an excellent fit (χ^2/df = 2.05, CFI = .82, GFI = .90, RMSEA = .045). In support of P4, the pattern of relationships between constructs replicates almost perfectly across cultures (with only one effect not replicating in Germany, see Figure 1 Section B). Specifically, in each culture, *PIC* is positively associated with *aesthetics* (β's ranging from .35 to .51, $p's < .001$) and *usefulness/usability* (β's ranging from .55 to .69, $p's < .001$). *SIC* is

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positively associated with *aesthetics* (β's ranging from .35 to .37, *p's* < .001) and *exclusivity* (β's ranging from .55 to .69, *p's* < .001), but negatively with *usefulness/usability* (β's ranging from -.28 to -.12, *p*'s ranging from .84 to < .001). This divergent pattern between PIC and SIC provides support for P2 (in the U.S.), while its cross-cultural replication provides support for P4. Additionally, *PIC* is positively related to *desirability* (β's ranging from .38 to .57, *p's* < .001) and negatively related to *negative stereotypes* (β's ranging from -.20 to -.24, *p*'s ranging from .031 to <.001), while *SIC* is positively related to both *desirability* and *negative stereotypes* (β's ranging from .23 to .58, *p's* < .001), see Figure 1 Section B for full results. This divergent pattern between PIC and SIC provides support for P3 (in the U.S.), while its cross-cultural replication provides support for P4.

Results–Within- and Cross-Cultural Comparisons. We investigate how coolness interpretations vary within and across cultures. A mixed ANOVA with *tendency towards PIC vs. SIC* as within-subject factor and *culture* as between-subjects factor shows a significant main effect of *tendency towards PIC vs. SIC* ($F(1, 522) = 159.17$, $p < .001$, partial eta-squared = .234) and a significant interaction ($F(2, 522) = 12.39$, $p < .001$, partial eta-squared = .045). Specifically, *PIC* ($M_{\text{Total}} = 5.74$) scores higher than *SIC* ($M_{\text{Total}} = 4.60$) within each culture (*p's* < .001; US: partial eta-squared = .347; Germany: partial eta-squared = .240; China: partial eta-squared = .191). Additionally, a MANOVA with *PIC* and *SIC* as dependent variables reveals that *culture* has only a marginally significant effect on *PIC* ($F(2, 522) = 2.49$, $p = .083$, partial eta-squared = .009), but a significant effect on *SIC* ($F(2, 522) = 12.13$, $p < .001$, partial eta-squared = .044), with China ($M = 5.19$) scoring higher than the U.S. ($M = 4.35$, $p < .001$) and Germany ($M = 4.60$, $p = .003$) on *SIC*. This pattern of results also replicates in Study 3.

In a series of ANOVA-based cross-cultural comparisons of the coolness-related product attributes, *usefulness/usability* does not differ by culture ($F(2, 522) = .39$, $p = .676$, partial eta-squared = .001). *Aesthetics* perceptions ($F(2, 522) = 6.72$, $p < .001$, partial eta-squared = .025)

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are significantly lower in Germany ($M = 5.28$) compared to the U.S. ($M = 5.81$, $p < .001$) and China ($M = 5.61$, $p = .039$). *Exclusivity* perceptions ($F(2, 522) = 17.15$, $p < .001$, partial eta-squared = .062) are significantly higher in China ($M = 5.52$) compared to the U.S. ($M = 5.10$, $p = .010$) and Germany ($M = 4.43$, $p < .05$). Except for the findings related to *aesthetics*, this result pattern also replicates in Study 3 (see Table 2).

< Insert Table 2 about here >

In a cross-cultural comparison of coolness-related outcomes, the perceived *desirability of cool products* varies by *culture* ($F(2, 522) = 17.04$, $p < .001$, partial eta-squared = .061), with Chinese consumers rating cool products as significantly more desirable ($M = 5.59$) than U.S. ($M = 4.76$, $p < .001$) or German consumers ($M = 4.94$, $p < .001$). Similarly, *negative stereotypes against coolness* vary by *culture* ($F(2, 522) = 9.13$, $p < .001$, partial eta-squared = .034), with German consumers indicating stronger *stereotypes* ($M = 4.15$) than U.S. ($M = 3.49$, $p < .001$) and Chinese consumers ($M = 3.53$, $p < .001$; see Table 2).

Conclusions of Study 2. Study 2 investigates the cross-cultural robustness of an integrative framework that centers around consumers' interpretation of coolness and its links to coolness-related product attributes and outcomes. Using a multi-cultural approach, we show that this framework is highly robust across cultures. First, the *Personal* (*PIC*) and *Social Interpretation of Coolness* (*SIC*) represent two distinct factors, with *PIC* being the more dominant interpretation. Second, the two *coolness interpretations* correlate with distinct but overlapping product attributes that consumers often associate with coolness. *PIC* is positively linked to *aesthetics, exclusivity* (except for Germany), and *usefulness/usability*, while *SIC* is positively linked to *aesthetics* and *exclusivity,* but negatively linked to *usefulness/usability*. We theorize that each attribute can contribute towards coolness perceptions on its own, though combinations are likely to be most impactful. Third, the two interpretations can differentially predict desirable and undesirable coolness-related outcomes: the perceived *desirability of cool*

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products is positively predicted by either *interpretation*, while *negative stereotypes against cool products* are amplified by *SIC* but reduced by *PIC*. Together, these findings provide support for P1-P4, by demonstrating that *PIC* and *SIC* exhibit consistently distinct patterns of associations (P1-P3) across the three cultures (P4). This underscores the nuanced nature of the product coolness construct, but also its cultural robustness.

It is worth considering whether the two interpretations of coolness represent different constructs of coolness that consumers hold simultaneously or distinct constructs that consumers linguistically group under the label of 'coolness.' Our findings reveal a robust cross-cultural pattern in the relationship between the two coolness interpretations and other elements in the proposed integrative framework. This pattern suggests that true conceptual relatedness, rather than pure linguistic clustering, underpins the observed dual-factor structure of product coolness.

We also observe several cross-cultural differences (that later replicate in Study 3) that notably set China apart from the other two cultures. Specifically, Chinese consumers show greater endorsement of *SIC*, place greater emphasis on *exclusivity* as a coolness driver, and rate cool products as more desirable than U.S. and German consumers. They also exhibit the largest gap between perceived desirability and negative stereotypes, suggesting that they may be more insulated from the potentially detrimental outcomes of product coolness.

Together, these results suggest that, while the structural relationships in the integrative framework are largely stable across cultures (i.e., consumers across cultures apply similar conceptual processes to assess coolness), the relative importance of specific elements within the framework is shaped by culture. Study 3 explores several cultural values that may help explain the cross-cultural differences found in this study.

Study 3: Cultural Factors as Explanation for the Cross-Cultural Patterns

In Study 3 we aim to: (1) replicate the main patterns of results from Study 2, (2) test propositions P1-P4, and (3) uncover which cultural values can account for the cross-cultural

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differences observed in Study 2 (specifically, the finding that Chinese consumers show a stronger endorsement of *SIC* and associate coolness more strongly with *exclusivity* than do U.S. and German consumers).

Method. Using an online panel administered and quality-controlled by Qualtrics, we collect data from 100 respondents (from the US, Germany, and China), who participated in the study in exchange for compensation. For each culture, the sample was selected to be largely representative of the respective country in terms of age, gender, and ethnicity (see Web Appendix D for the full demographic data). Web Appendix E details all the scale items used for measuring the cultural values/dimensions. Additionally, although the construct of coolness originated in the U.S., different cultures may have different mental associations between the U.S. and coolness, potentially influencing their interpretation of coolness. We therefore include a 3-point scale measuring the *degree of perceived association between coolness and the U.S.* (α = .93), meant as a control variable. Translation and back-translation procedures were identical to those used in the previous study.

Results–PIC vs. SIC. The results largely replicate the pattern from Study 2 (see Table 2). First, we examine which *coolness interpretation* is more prominent and whether consumers' *tendency towards PIC vs. SIC* varies by *culture*. A mixed ANOVA with *tendency towards PIC vs. SIC* as within-subject factor and *culture* (U.S. vs. Germany vs. China) as between-subjects factor reveals a significant main effect of *tendency* ($F(1, 97) = 20.92$, $p < .001$, partial eta-squared = .177). Specifically, *PIC* is rated significantly higher than *SIC* across all cultures combined ($M_{\text{Personal}} = 5.44$, $M_{\text{Social}} = 4.77$) and within each culture (US: $p = .013$, partial eta-squared = .182, Germany: $p = .005$, partial eta-squared = .221; China: $p = .035$, partial eta-squared = .124), although no interaction with *culture* emerges this time (($F(2, 97) = .73$, $p = $ .483, partial eta-squared = .015). Next, we investigate how each *interpretation* varies by *culture*. Consistent with Study 2, *culture* has a marginally significant impact on *PIC* ($F(2, 97) = 2.76$, p

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= .068, partial eta-squared = .054), and a significant effect on *SIC* (($F(2, 97) = 4.66$, $p = .012$, partial eta-squared = .088). *SIC* scores are higher in China ($M = 5.43$) than in the U.S. ($M = 4.50$ $p = .019$) and Germany ($M = 4.32$, $p = .004$).

Results–Coolness-Related Product Attributes. In a series of ANOVAs, we find no effect of culture on *usefulness/usability* ($F(2, 97) = .20$, $p = .814$, partial eta-squared = .004) or *aesthetics* perceptions ($F(2, 97) = 3.86$, $p = .140$, partial eta-squared = .040). We find a significant effect on *exclusivity* perceptions ($F(2, 97) = 3.66$, $p = .029$, partial eta-squared = .070), which are higher in China ($M = 5.36$) than in Germany ($M = 4.32$, $p = .008$). Except for the findings related to *aesthetics*, these results replicate those obtained in Study 2.

Results–Coolness-Related Outcomes. Consistent with Study 2, the perceived *desirability of cool products* varies by culture ($F(2, 97) = 6.95$, $p = .002$; partial eta-squared = .125). Chinese consumers rate cool products as significantly more desirable ($M = 5.30$) than U.S. ($M = 4.28$, $p = .006$) and German consumers ($M = 4.03$, $p < .05$). *Negative stereotypes* also vary by culture, though only marginally ($F(2, 97) = 2.96$, $p = .056$, partial eta-squared = .058). This time, U.S. consumers report more negative *stereotypes* ($M = 3.89$) compared to German ($M = 3.09$, $p = .046$) and Chinese consumers ($M = 3.03$, $p = .030$; see Table 2).

Results–Differences in Cultural Values. A MANOVA reveals a significant effect of culture on multiple values: *Individualism/Collectivism* ($F(2, 97) = 4.94$, $p = .009$, partial eta-squared = .093), *Indulgence/Restraint* ($F(2, 97) = 5.63$, $p = .005$, partial eta-squared = .104), and *Long/Short-Term Orientation* ($F(2, 97) = 5.83$, $p < .004$, partial eta-squared = .107). There is also a marginally significant effect on *Achievement/Ascription* ($F(2, 97) = 2.66$, $p = .075$, partial eta-squared = .052). The pattern of cross-cultural differences is relatively consistent, with Chinese consumers generally scoring higher than U.S. and German consumers on across the first three cultural values. This is in line with previous cross-cultural research findings (e.g., Hofstede, 1980, Smith et al. 1996), which provides convergent validity for our results.

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We find no effect of culture on *Intellectual Autonomy* ($F(2, 97) = 1.85$, $p = .163$, partial eta-squared = .037), which is consistent with Schwartz (2013). Finally, we observe a marginally significant effect of culture on *Association of Coolness with the U.S.* ($F(2, 97) = 3.03$, $p = .053$, partial eta-squared = .059; see Table 2), so we retain it in the remaining analyses. Based on these results, we identify *Individualism/Collectivism, Indulgence/Restraint, Long/Short-Term Orientation* and *Achievement/Ascription* as likely candidates to explain why Chinese consumers score higher on *SIC* and associate coolness more strongly with *exclusivity*.

Results–Cultural Values as Predictors for the Interpretations of Coolness. We next examine which cultural value(s) best predict *PIC* versus *SIC*. A series of stepwise regression analyses shows that *PIC* and *SIC* are influenced by distinct but overlapping sets of cultural predictors[4]. *PIC* is significantly predicted by *Intellectual Autonomy/Embeddedness* ($\beta = .39$, $t = 4.33$, $p < .001$) and *Short-Term/Long-Term Orientation* ($\beta = .37$, $t = 4.12$, $p < .001$), $R^2 = .48$. *SIC* is significantly predicted by *Achievement/Ascription* ($\beta = .35$, $t = 4.29$, $p < .001$) and *Short-Term/Long-Term Orientation* ($\beta = .45$, $t = 5.50$, $p < .001$), $R^2 = .48$. These findings are consistent with Studies 1 and 2 in supporting the view that *PIC* and *SIC* represent correlated but distinct factors (P1). Additionally, the positive relationship between *PIC* and *Intellectual Autonomy* supports H2, while the positive relationship between *SIC* and *Ascription* supports H5a. However, we find no significant link between *Individualism/Collectivism* and *SIC* (H1a) or between *Indulgence/Restraint* and *PIC* (H4a). Thus, H1a and H4a are not supported.

Results–Cultural Values as Predictors for Coolness-Related Product Attributes. To examine which cultural value(s) best explain the observed cross-cultural patterns in coolness-related product attributes, particularly *exclusivity*, we conduct another stepwise regression All

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[4] The choice of analysis method was due to our specific combination of variables in this study—several variables are borrowed from our prior studies; some are newly introduced—and stepwise regression allows us to focus on the most important ones.

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cultural values serve as predictors and *exclusivity* serves as dependent variable. *Achievement/Ascription* (β = .38, *t* = 4.29, *p* < .001) and *Intellectual Autonomy/Embeddedness* (β = .30, *t* = 3.43, *p* < .05), R^2 = .32, emerge as significant predictors. Among these, *Intellectual Autonomy/Embeddedness* positively predicts all other product attributes (aesthetics: β = .13, *t* = 2.93, *p* = .004; usefulness/usability: β = .30, *t* = 3.06, *p* = .003), while *Achievement/Ascription* predicts only *exclusivity* (*p* = .262 and .616 for the remaining attributes). This distinction suggests that *Achievement/Ascription* plays a unique role in differentiating *exclusivity* from other product attributes, providing support for H5b. Conversely, we find no support for H1b, H3, and H4b, which posit links between *exclusivity* and *Individualism/Collectivism*, *Short-Term/Long-Term Orientation* and *Indulgence/Restraint*, respectively.

Results–Cultural Values as Predictors for Coolness-Related Outcomes. Lastly, we examine which cultural value(s) best explain the result pattern observed for *desirability* and *negative stereotypes*. A stepwise regression reveals *Intellectual Autonomy/Embeddedness* (β = .46, *t* = 5.16, *p* < .001) and *Achievement/Ascription* (β = .18, *t* = 2.05, *p* = .042)*, R^2 = .31*, to be significant predictors for *perceived desirability*. Significant predictors for *negative stereotypes* are *Association with the U.S.* (β = .21, *t* = 2.11, *p* = .037*) and *Indulgence/Restraint* (β = .20, *t* = 2.03, *p* = .045)*, R^2 = .11.

Conclusions of Study 3. Study 3 successfully replicates the pattern of cultural differences observed in Study 2 and further identifies several underlying cultural mechanisms that account for the observed differences. While the sample size is modest, the results demonstrate a high degree of consistency across studies and cultures, providing support for the majority of our propositions and hypotheses. Our approach of focusing on effects that exhibit strong replication patterns across studies enhances confidence in the validity of our findings.

We test a range of hypotheses regarding the influence of cultural values on product coolness interpretations and find support for the majority. Specifically, *Intellectual Autonomy*

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is positively associated with *PIC* and *Ascription* is positively associated with *SIC*, which sheds lights on the distinct cultural underpinnings of the two coolness interpretations. Additionally, although not originally hypothesized, we find *Long-Term Orientation* to be positively related to both *PIC* and *SIC,* which suggests that it can explain some of the shared features between the two interpretations.

One notable finding is that *Individualism/Collectivism* did not emerge as a significant cultural predictor, despite prior research hypothesizing that it may do so (Warren et al. 2019). To further probe the impact of this cultural value, we conduct an alternative stepwise regression, with consumers' *tendency towards PIC vs. SIC* as the dependent variable. *Intellectual Autonomy/Embeddedness* ($\beta = .38$, $t = 3.96$, $p < .001$) and *Achievement/Ascription* ($\beta = -.27$, $t = -2.36$, $p = .020$) again emerge as significant predictors, alongside *Individualism/Collectivism* ($\beta = -.30$, $t = -2.50$, $p = .014$), $R^2 = .25$. This suggests that *Individualism/Collectivism* does play a role, though more as a factor that distinguishes *PIC* from *SIC* rather than a driver of *SIC* alone.

When it comes to the impact of cultural values on coolness-related product attributes, we find support for one of three hypotheses: the relationship between *exclusivity* and A*chievement/Ascription*. Though not hypothesized, we also find *Intellectual Autonomy/Embeddedness* to be positively linked to all three types of product attributes. Moreover, both *Achievement/Ascription* and *Intellectual Autonomy/Embeddedness* are positively related to *desirability,* while *Indulgence/Restraint* is positively related to *stereotypes.*

Regarding the impact of cultural values on coolness-related outcomes, the results suggest that desirability judgments may primarily be linked to personal value orientations (i.e., *Intellectual Autonomy/Embeddedness* and *Achievement/Ascription*), while negative stereotypes may be shaped more by broader cultural associations (i.e., *association of coolness with the U.S.*) and self-regulatory values (i.e., *Indulgence/Restraint*).

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Overall, the results point towards *Achievement/Ascription* as the most effective explanatory factor for why Chinese consumers provide higher ratings for *SIC, exclusivity,* and *desirability* relative to their German and U.S. counterparts. Specifically, *Ascription* scores are higher among Chinese consumers in our sample and *Ascription* also emerges a significant positive predictor for *SIC, exclusivity,* and *desirability* (see Figure 2). While *Intellectual Autonomy/Embeddedness* exhibits the same prediction pattern, it does not show elevated levels among Chinese consumers, which limits its explanatory power in a cross-cultural context. *Individualism/Collectivism* may also play a role particularly in distinguishing *PIC* from *SIC*, but its explanatory contribution appears more nuanced and secondary.

We propose the following mechanism to account for the observed cultural effects. In a culture high on *Ascription*, status is conferred based on visible, socially-sanctioned markers (Smith et al. 1996). The acquisition of conspicuous products, which signal membership in a wealthy social class, can serve as an effective means for instantaneously attaining social status and validation. Given the importance of "prestige face" (social status) in Chinese culture, Chinese consumers have a heightened aspiration toward luxury and status-enhancing goods (e.g., Atsmon et al. 2011, Jung and Shen 2011), particularly for signifying cosmopolitan identity (Rambourg 2020, Zhou and Belk 2004). Consequently, China's orientation towards *Ascription* can explain why exclusivity functions as a key driver of product coolness, particularly via the *SIC* route, and why Chinese consumers view cool products as particularly desirable.

DISCUSSION

Making a product appear cool to a broad and diverse consumer base is increasingly critical for product success in today's global markets (Sundar et al. 2014). To effectively achieve this success, managers need to first understand what consumers mean when they label a product as 'cool,' and how such perceptions vary cross-culturally. This represents the focus of the present research.

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Summary of Findings

Across three major cultures that use the English term "coolness" in everyday language, we uncover a highly robust pattern: product coolness it not a unitary construct. Rather, it can be interpreted in two distinct, though overlapping, ways. First, a product is cool if it generates excitement and admiration in consumers; we call this the *Personal Interpretation of Coolness* (*PIC*). Second, a product is cool if it benefits from or provides social validation; we call this the *Social Interpretation of Coolness* (*SIC*). We propose an integrative framework that differentially links the two interpretations to various coolness-related product attributes and outcomes, and illuminates some fundamental differences between *PIC* and *SIC*. The framework is highly stable across cultures in terms of the *PIC* versus *SIC* distinction, the dominance of *PIC* over *SIC*, and the sign of the relationships between the various elements of the framework. However, the strength (or weights) of the relationships varies cross-culturally, which can be partially explained based on differences in specific cultural values.

Theoretical Contributions

This multicultural research makes three theoretical contributions to the literature. First, we contribute to the theoretical development of the product coolness concept, by hypothesizing and measuring two distinct consumer interpretations of product coolness: the personal and social interpretation of coolness. This dual conceptualization formalizes the previous finding that consumers may perceive something as cool due to entirely different—and occasionally even incompatible—motivations (Ferguson 2011). It also extends the previously researched distinction between 'mass cool' and 'niche cool,' which uses the breadth of a brand's social appeal as the main criterion for classifying types of coolness (Warren et al., 2019). We additionally develop and validate an integrative framework that distinguishes between the *PIC* and *SIC* interpretations of coolness and differentially associates each with a set of coolness-related product attributes and outcomes. The framework extends research by Warren and

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Campbell (2014), Warren et al (2019), and Bagozzi and Batra (2025), who conceptualize coolness (in the context of brands) as a form of bounded autonomy. We show that cultural objects, such as products, can achieve such autonomy in two largely distinct ways.

The identification of these two distinct routes to coolness provides a compelling explanation for why cool products may simultaneously evoke positive and negative consumer responses (Ferguson 2011). Specifically, such contradictions depend on which interpretation of coolness is activated. Furthermore, by embedding coolness within this integrative framework, we contribute to the broader consumer research literature on functional and symbolic product attributes (e.g., Homburg, Schwemmle, and Kuehnl 2015). Notably, we highlight that some attributes traditionally seen as desirable, such as usefulness or usability, may actually inhibit perceptions of coolness when coolness is interpreted primarily through a social lens, revealing potential downsides of otherwise positive product features.

Second, we contribute to the integration of two previously disconnected research streams that address coolness in a multicultural context. One stream examines the cultural invariance of the coolness construct, focusing on the shared characteristics of coolness (Sundar et al 2014, Warren et al 2019) or the universal elements of cool consumption experiences (Belk et al 2010, Ferguson 2011). The other stream explores cross-cultural variations in the content of coolness (Belk et al 2010). While these bodies of work offer valuable insights, they have not articulated or empirically tested a theory that clarifies which aspects of coolness are universal versus culturally dependent. Our research proposes and tests such a theory.

With regard to the universality aspect, we find that the structure of the coolness framework remains largely stable across the three examined cultures. This consistency suggests a cross-culturally shared cognitive representation of coolness and its associated product attributes and outcomes. It also helps place earlier findings around coolness in context. Across cultures, *product aesthetics* emerges as the universally stronger route for achieving coolness, as

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it positively correlates with both coolness interpretations. This finding can explain why multiple studies have identified *aesthetics* as one of the strongest predictors of brand or product coolness (see Web Appendix A for a full list). On the other hand, *product usability/usefulness*—another attribute with high coolness ratings in our studies—consistently activates a narrower interpretation of coolness. This helps explain why, even though both aesthetics and usefulness are top-of-mind drivers for coolness perceptions, only aesthetics has been found capable to distinguish cool from uncool brands (Warren et al. 2019).

With regard to the cultural dependence aspect, our findings suggest that some of the weights of the integrative framework elements vary cross-culturally, particularly between China and the two Western cultures. Chinese consumers subscribe more to *SIC* and rely more on *exclusivity* as a driver of coolness. They also have an objectively large gap between *coolness-related desire* and *negative stereotypes*, meaning that they see cool products in a predominantly positive light. These findings suggest that coolness—especially when derived from perceptions of product luxury—can function as a powerful form of social and cultural capital among Chinese consumers. This may in turn translate into Chinese consumers assigning relatively higher economic value to cool (versus uncool) products compared to U.S. or German consumers, which has important implications for global product managers.

Third, extending Belk et al.'s (2010) approach to a quantitative inquiry, we connect elements of our proposed integrative framework to several well-established cultural dimensions/values (e.g., Hofstede, 1980, Trompenaars and Woolliams 2002, Schwartz 2013). By validating those connections, we demonstrate how specific cultural values can account for the cross-cultural variations observed in our earlier coolness-related studies. In line with our conceptualization of *PIC* and *SIC* as distinct yet related constructs, we find that they are both positively predicted by *Long-/Short-Term Orientation* but differentially predicted by *Intellectual Autonomy/Embeddedness* (which favors *PIC)* and *Achievement/Ascription* (which

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favors *SIC*). We empirically demonstrate how *Ascription* and, to a lesser extent, *Individualism,* can help predict multiple elements in our framework that together differentiate Chinese from Western consumers. To our knowledge, this is the first research to systematically investigate cultural differences in coolness perceptions, using cultural theory to provide insights into the observed cross-cultural patterns. The obtained findings contribute to the global marketing literature, by demonstrating the wide-ranging impact of key cultural values on consumers' understanding of and responses to product coolness.

Managerial Implications

First, our integrative framework for product coolness offers a roadmap for what cultural aspects managers should consider when aiming to create cool products globally, and how to address those via culturally-targeted product and marketing strategies. It provides managers with two approaches for creating 'cool' products. The first builds on *PIC* and involves triggering excitement and/or admiration, via either symbolic or functional product attributes, or, ideally, a combination of both (such as in the case of smartphones or fully electric vehicles). By focusing on a product's intrinsic qualities, this approach reduces vulnerability to negative stereotypes that may arise when coolness is socially derived. The second approach, grounded in *SIC*, involves socially validating a products' appeal via associations with desirable entities such as trendsetters, celebrities, or cool brands. While the *PIC*-based approach has broad, cross-cultural appeal, the *SIC*-based approach is particularly effective in ascription-oriented and collectivistic cultures, such as China. There, consumers are often more skeptical of new products and rely heavily on social endorsements to gain insights into which products to buy. This behavior makes influencer marketing potent, especially for categories such as beauty products or smartwatches, where influencers heavily shape products coolness perceptions (Shin and Biocca 2018). Managers should therefore consider using the *PIC*-based approach as the baseline for creating universally appealing cool products and then layer on *SIC*-based tactics,

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such as influencer collaborations, in markets where social validation plays a larger role.

Second, our findings offer robust insights into which product attributes global managers and designers should focus on in order to effectively elicit coolness perceptions. Overall, the different attributes appear equally effective top-of-mind drivers of coolness perceptions (with mean values around or above 5 on a 7-point scale, across all samples in our studies). Yet a deeper examination reveals distinct underlying patterns. Aesthetic product designs enhance coolness both by generating pleasure or excitement and by signaling social appeal. Functionality-focused attributes (i.e., usefulness/usability) primarily foster appreciation or admiration, but may actually undermine a product's social cachet. Therefore, managers should leverage such attributes with caution, as an overemphasis on functionality may diminish expectations of social value, especially when *SIC* is highly relevant for coolness perceptions.

Exclusivity, another key coolness driver, also warrants caution, as its effectiveness is culture-bound. It performs well among Chinese consumers, who rank it high alongside aesthetics and usability. However, it is less appreciated among German consumers, who prefer usefulness/usability as a coolness driver. We therefore recommend that managers rely on exclusivity as a basis for coolness primarily in cultures that value *Ascription* (or *Collectivism*), such as China. This insight is further bolstered by our finding that Chinese consumers exhibit a greater tolerance for potential negative stereotypes directed at cool or exclusive products and their owners, showing a generally favorable predisposition towards the concept of 'cool.'

Third, our findings highlight how product design strategies can remain globally consistent, while marketing communications should be culturally adapted to optimize coolness perceptions. In China, messaging should focus on evoking a sense of exclusivity, social appeal, or social connection. In Germany, the focus should be on the performance, usability, or efficiency aspects of a product, possibly supplemented with subtle social appeal cues.

Limitations and Directions for Further Research

The current investigation opens several promising avenues for future advancing the field's understanding of product coolness in a global context. First, our work focuses on two core interpretations of product coolness, personal versus social, and their links to other elements in our proposed integrative framework for coolness. However, our preliminary findings from Study 1A suggest those constructs and their relationships can be further unpacked. Once we understand coolness at those foundational levels, future research can explore its expression across different social levels, such as personal, interpersonal, group, and intergroup contexts.

Second, researchers may investigate whether specific product attribute combinations are more powerful coolness drivers than individual attributes alone, and how such combinations may activate different coolness pathways or may interact with cultural norms. While activating more than one interpretation of coolness may be mutually reinforcing, there may be limits to this strategy. For example, overloading a product with too many coolness-driving attributes may undermine its authenticity and paradoxically reduce its perceived coolness. Moreover, as coolness is a dynamic and evolving construct (Heath and Potter 2004, Warren et al. 2019), future research may also explore the role of time in shaping the proposed integrative framework.

Third, what other factors or mechanisms can explain the influence of culture on consumers' coolness interpretations? Our research focuses on a set of cultural values that are most likely to shape the *PIC* versus *SIC* distinction and/or the coolness-related product attributes and outcomes. However, other cultural dimensions may also play a role. Future research may explore the role of masculinity/femininity (Hofstede 1980) or consumer innovativeness (Tellis et al 2009), to better understand the cultural roots of coolness. It may also examine what role culture plays in the formation of coolness through specific cultural processes such as rituals, mimicry, identification, or valorization.

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Finally, while our research investigates the predictive role of cultural values relative to different elements of our framework, future work could aim for larger sample sizes, to also explore mediation effects. By investigating how different cultural values mediate the relationships between product attributes, interpretations of coolness, and consumer responses, such research could enrich our understanding of the mechanisms underlying cultural influences on coolness and offer more granular insights into global product positioning strategies.

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Figure 1

Section A: Integrative Framework for Consumers' Interpretation of Product Coolness
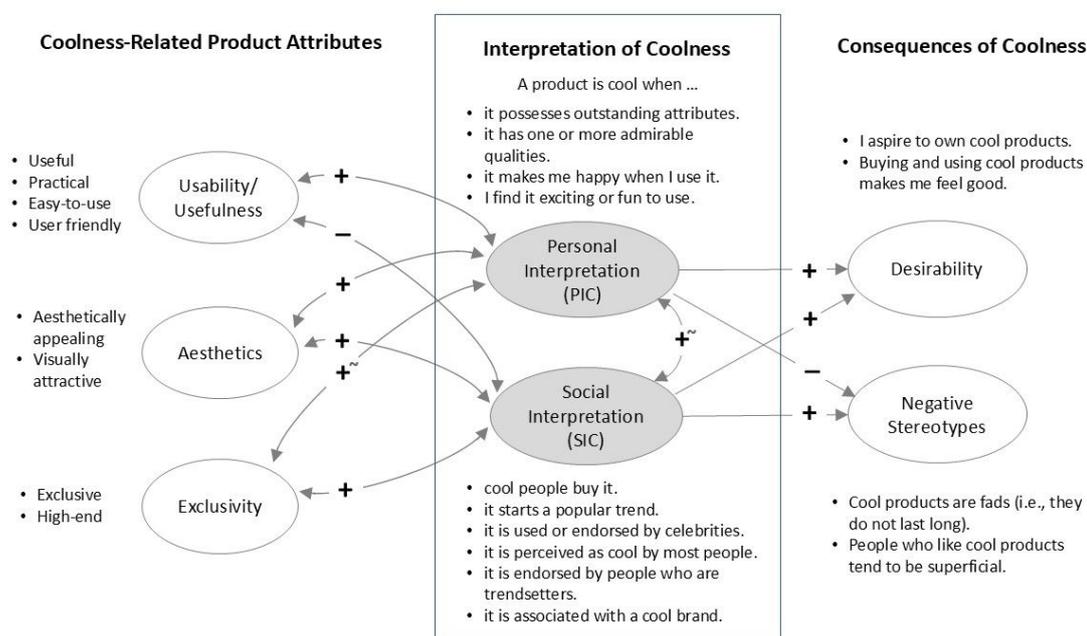
Section B: The Standardized Correlation Coefficients and Standardized Regression Weights in Study 2

|	US		Germany		China	
Standardized Correlation Coefficients	Coeff.	Sig.	Coeff.	Sig.	Coeff.	Sig.
Personal Interpretation <--> Social Interpretation	-.04	*p* = .590	.35	*p* < .001	.65	*p* < .001
Personal Interpretation <--> Aesthetics	.35	*p* < .001	.40	*p* < .001	.51	*p* < .001
Personal Interpretation <--> Exclusivity	.26	*p* < .001	-.02	*p* = .780	.17	*p* = .032
Personal Interpretation <--> Usefulness/Usability	.55	*p* < .001	.69	*p* < .001	.58	*p* < .001
Social Interpretation <--> Aesthetics	.35	*p* < .001	.37	*p* < .001	.35	*p* < .001
Social Interpretation <--> Exclusivity	.74	*p* < .001	.81	*p* < .001	.71	*p* < .001
Social Interpretation <--> Usefulness/Usability	-.28	*p* < .001	-.24	*p* < .001	-.12	*p* = .084
Standardized Regression Weights						
Personal Interpretation → Desire	.53	*p* < .001	.37	*p* < .001	.569	*p* < .001
Personal Interpretation → Stereotypes	-.20	*p* = .013	-.20	*p* = .031	-.237	*p* < .001
Social Interpretation → Desire	.27	*p* < .001	.52	*p* < .001	.225	*p* < .001
Social Interpretation → Stereotypes	.58	*p* < .001	.55	*p* < .001	.336	*p* < .001

Note (for Section A):

- All relationships represented in the framework have been tested.

- Relationships shown with a solid line represent significant (or marginally significant) paths in all three samples.

- Relationships shown with a solid line and a tilde (~) are significant in all but one sample.

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Figure 2

Integrative Framework for Consumers' Interpretation of Product Coolness and the Hypothesized Impact of Cultural Values
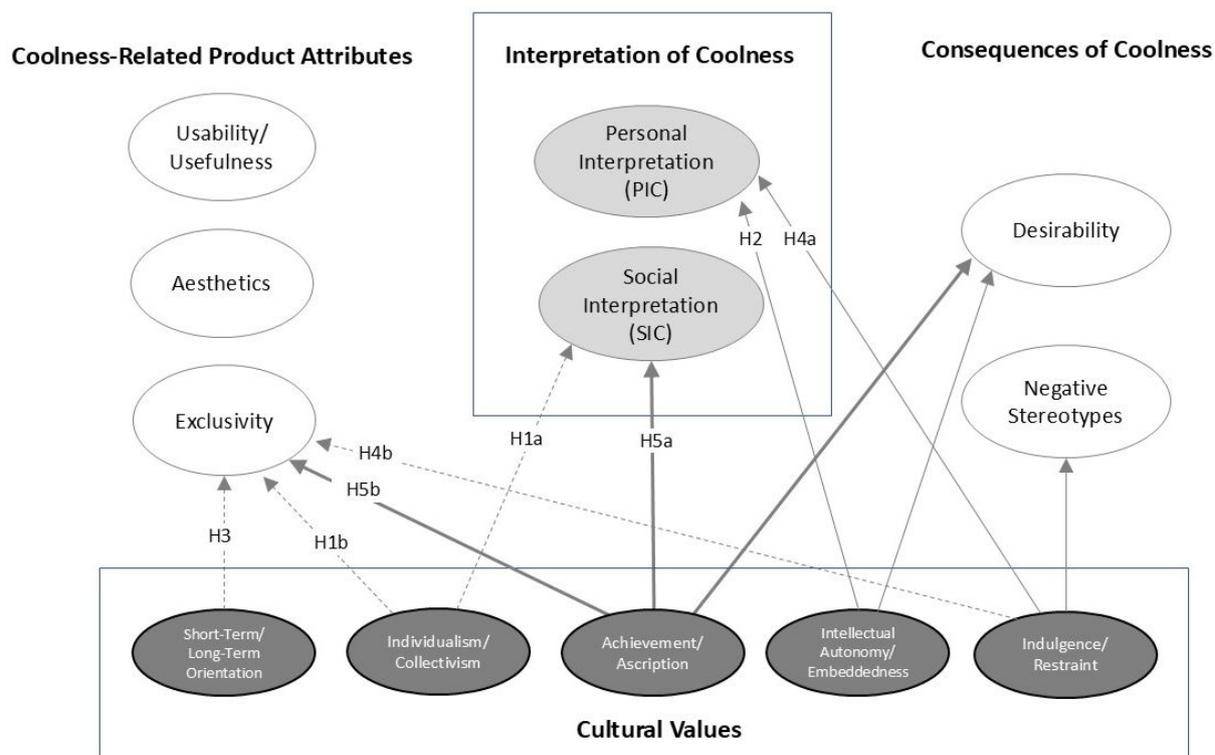
Note:
- All relationships between cultural values (as predictors) and the elements of the integrative framework have been tested in Study 3.
- The figure shows only the relationships between cultural values, coolness interpretations, and coolness-related product attributes (exclusivity) and the significant relationships between cultural values and coolness-related outcomes. The focus on exclusivity is motivated by the cross-cultural differences observed for this construct in Study 2, which can be linked to differences in cultural values in Study 3.
- Relationships shown with solid (vs. dotted) lines represent significant (vs. non-significant) paths.

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Table 1

How the Current Paper Advances Prior Research on *Product Coolness*

Study	Theory and Constructs Investigated				Cross-Cultural Investigation			Research Methods Used	
	Integrative Theoretical Framework	Meaning/ Interpretation of Coolness	Coolness-Related Product Attributes	Consequence of Coolness	Cross-Cultural Research	Representing 3 Diff. Continents	Cultural Values Examined	Scale Development	SEM
Current article	*Yes*	*Yes*	*Yes*	*Yes*	*Yes* (quantitative)	*Yes*	*Yes*	*Yes*	*Yes*
Belk et al (2010)	No	No	No	No	Yes (qualitative)	No**	No	No	No
Ferguson (2011)	No	Yes	No	No	Yes (qualitative)	No**	No	No	No
Sundar et al (2014)	No	No	No	No	Yes (quantitative)	No**	No	Yes	No
Warren and Campbell (2014)*	No	Yes	Yes	Yes	No	None	No	Yes	No
Im, Bhat, and Lee (2015)	No	No	No	No	No	None	No	No	No
Bruun et al (2016)	No	Yes	No	No	No	None	No	Yes	No
Raptis et al (2017)	No	Yes	No	No	No	None	No	Yes	No
Warren et al (2019)*	Yes	Yes	Yes	No	Yes (qualitative)	None	No	Yes	Yes
Kim and Park (2019)	No	Yes	No	Yes	No	None	No	No	No
Tiwari et al (2021)	No	Yes	No	Yes	No	None	No	No	No
Li et al (2021)	No	Yes	No	Yes	No	None	No	No	No
Lv et al (2024)	No	Yes	No	Yes	No	None	No	No	No

Note:

*Warren and Campbell (2014) and Warren et al (2019) examine *brand coolness* instead of *product coolness*. They are still listed here due to the importance of these papers to conceptualizing the coolness construct.

** representing 2 continents

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Table 2

Studies 2-3: Means and Standard Deviations for the Interpretations of Coolness, Coolness-Related
Product Attributes, and Cultural Values/Factors across Cultures

	STUDY 2 ($N = 525$)				STUDY 3 ($N = 100$)			
	U.S.	Ger-many	China	*Sig.*	U.S.	Ger-many	China	*Sig.*
Interpretation of Coolness								
Personal Int. (PIC)	5.83 (0.95)	5.57 (1.22)	5.77 (1.16)	$p = .083$	5.31 (1.54)	5.14 (1.43)	5.86 (0.99)	$p = .068$
Social Int. (SIC)	4.35 (1.74)	4.60 (1.62)	5.19 (1.41)	$p < .001$	4.50 (1.85)	4.32 (1.73)	5.43 (1.19)	$p < .001$
Product Attributes								
Aesthetics	5.81 (1.22)	5.28 (1.49)	5.61 (1.47)	$p < .001$	5.09 (1.46)	4.85 (1.53)	5.51 (1.16)	$p < .001$
Exclusivity	5.10 (1.56)	4.43 (1.62)	5.52 (1.53)	5.10 (1.56)	4.92 (1.77)	4.32 (1.73)	5.36 (1.22)	$p < .001$
Usefulness/Usability	5.34 (1.32)	5.22 (1.49)	5.25 (1.40)	$p > .10$	5.03 (1.49)	5.27 (1.69)	5.19 (1.43)	$p = .676$
Consequences of Coolness								
Desire	4.76 (1.41)	4.94 (1.45)	5.59 (1.20)	$p < .001$	4.28 (1.48)	4.03 (1.63)	5.30 (1.36)	$p = .002$
Negative stereotypes	3.49 (1.41)	4.15 (1.67)	3.53 (1.59)	$p < .001$	3.89 *(1.73)*	3.09 *(1.51)*	3.03 *(1.55)*	$p = .056$
Cultural Values/Factors								
Individualism/Collectivism					4.38[a] (1.67)	4.21[a] (1.38)	5.22[b] (1.21)	$p = .009$
Indulgence/Restraint					2.73[a] (0.85)	2.52[a] (0.75)	3.13[b] (0.71)	$p = .005$
Long-/Short-Term Orientation					5.09[a,b] (1.35)	4.60[a] (1.18)	5.54[b] (0.82)	$p = .004$
Achievement/Ascription					3.89[a] (1.63)	4.14[a,b] (1.11)	4.62[b] (1.21)	$p = .075$
Intellectual Autonomy/Embeddedness					4.96[a] (1.38)	5.16[a] (1.14)	5.50[a] (1.00)	$p = .163$
Association with US					3.79[a] (1.32)	2.98[b] (1.41)	3.32[a,b] (1.27)	$p = .053$

Note:
- Horizontal grey bars denote result patterns that are consistent across Studies 2 and 3.
- All mean values are based on scales ranging from 1 (not at all) to 7 (extremely).
- Superscript letters indicate which mean values for a variable are significantly different from one other. Means that share at least one common letter (e.g., *a* and *ab*) are not significantly different from one other.

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What Makes a Product Cool?
Consumers' Perceptions of Product Coolness Across Three Cultures

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Web Appendix A
Summary of Previous Research on *Coolness*

Authors	Type of Coolness	Type of Research	Research Focus	Key Findings	Dimensions of / Attributes Linked to Coolness	No. of Countries	Cultural Values
Current article	Product coolness	Empirical	-Structure of coolness - Product attributes and outcomes linked to coolness -Cultural variations in perceived coolness	-Coolness has a two-factor structure, i.e., *PIC* and *SIC* -This structure remains stable across cultures, but the weights vary across cultures	Aesthetics, usability, exclusivity	3 (US, Germany, China)	Achievement vs. Aspiration, Individualism vs. Collectivism
Southgate (2003)	Brand coolness/ people coolness	Conceptual	Practice of coolhunting	Coolness stems from a brand's ability to express target customers' virtues	Authentic, autonomous, aesthetics	NA	NA
Nancarrow et al. (2001)	Brand coolness	Conceptual	Concept of cool	Cultural intermediates such as style leaders define coolness	Authentic, ritual, exclusivity, understated marketing	NA	NA
Bird and Tapp (2008)	Coolness	Conceptual	The use of coolness in social marketing	Use coolness in moderation in social marketing	Rebellious, illicit	NA	NA
Belk et al. (2010)	Coolness	Conceptual	Meaning of cool in different cultures	Coolness has multi-elements and its appeal varies by cultures	Attitude, performance, uniqueness, style, being streetwise	2 (US and Finland)	NA
Ferguson (2011)	Product coolness	Conceptual	Perception of cool in different cultures	Consumption of bungy jumping is considered cool but a global consensus on coolness is lacking	NA	3 (US, Ireland, UK)	NA
Holtzblatt (2011)	Product coolness	Conceptual	Factors driving cool experience	Accomplishment and connection are the most important factors	NA	NA	NA
Dar-Nimrod et al. (2012)	Brand coolness	Empirical	Dimensions of coolness	Coolness has a two-factor structure: cachet cool and contrarian cool	Active, status-promoting, rebellious, rough, emotionally controlled	1	NA
Runyan et al. (2012)	Brand coolness	Empirical	Dimensions of coolness	Coolness has two-factor structure: hedonic and utilitarian cool	Singular, personal, aesthetic, quality and functional cool	1	NA
Gerber and Geiman (2012)	People cool	Empirical	Measuring the existence of coolness perception of other people in social networks	Cool is a distributed property of a network	NA	1	NA
Rahman (2013)	Brand coolness	Empirical	Dimensions of coolness	Coolness has multi-elements	Fashionable, amazing, sophisticated, unique, entertaining, eye-catching	1	NA

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Sundar et al. (2014)	Product coolness	Empirical	Dimensions of coolness	Coolness has a three-factor structure	Originality, attractiveness, subcultural appeal	3 (US, South Korea, China)	NA
Warren and Campbell (2014)	Brand coolness	Empirical /Experiment	Factors driving coolness perception	Bounded autonomy increases coolness perception	Bounded autonomy	1	NA
Kim, Shin and Park (2015)	Brand coolness	Empirical	Impact of coolness on adoption	Coolness increases the acceptance of technology	Attractiveness, originality, subcultural appeal	1	NA
Im et al. (2015)	Product coolness	Empirical	Mediating effect of coolness	Novelty affects consumers' attitude towards product via coolness	Trendy, hip, appealing, fascinating, attractive	1	NA
Bruun et al. (2016)	Product coolness	Empirical	Dimensions of inner coolness	Inner coolness has three component characteristics	Desirability, rebelliousness, usability	1	NA
Mohiuddin et al. (2016)	Coolness	Conceptual	Dimensions of coolness	Coolness has seven dimensions	Deviating from norm, self-expression, indicative of maturity, subversion, pro-social, evasive, attractive	1	NA
Raptis et al. (2017)	Product coolness	Empirical	Relationship between coolness and user experience	A large group of cool and user experience factors converges into five	Rebellious, usability, desirability, hedonic quality, aesthetics	1	NA
Warren et al. (2019)	Brand coolness	Empirical	Dimensions of coolness	Coolness contains nine themes/components	Extraordinary/useful, aesthetic, energetic, high status, rebellious, original, authentic, subcultural, iconic, popular	4 (US, UK, Slovakia, Portugal)	NA
Kim and Park (2019)	Product coolness	Empirical	Effect of coolness on technology adoption	Coolness leads to positive consumer assessment	Utility, attractiveness, originality, subcultural appeal	1	NA
Loureiro et al. (2020)	Brand coolness	Empirical	Antecedents and consequences of brand coolness	Luxury values positively influence brand coolness, which in terns increases passionate desire	Useful, high status, popular, subcultural	1	NA
Lu et al. (2021)	Brand coolness	Empirical /Experiment	Impact of coolness on willingness to buy	Coolness increases customers' wiliness to buy green products	Autonomous, rebellious	1	NA
Tiwari et al. (2021)	Product coolness	Empirical	Relationship between coolness and brand love	Coolness increases brand love	Rebelliousness, desirability, innovativeness, reliability, attractiveness, usability	1	NA
Li et al. (2021)	Product coolness	Empirical	Relationship between coolness and intention to buy	Impact of coolness on tension to buy varies across different segments	Subcultural appeal, attractiveness, originality, utility	1	NA
Jimenez-Barreto et al. (2022)	Brand coolness	Empirical	Impact of coolness on communal brand connection and loyalty	Coolness increases brand connection and loyalty	Aesthetic, authentic, exciting, extraordinary, high status, iconic, original, popular, rebellious, subcultural	1	NA
Aleem et al. (2022)	Brand coolness	Empirical	Moderating role of coolness for product type and high-status perceptions	Brand coolness positively moderates the type of product and high-status perception	Iconic, popular, high status	1	NA

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Suzuki and Kanno (2022)	Brand coolness	Empirical	Effect of brand coolness on the purchase intention	Brand coolness of mass brand increase attitude towards the co-branded products and its purchase intention	Trendy, hip, appealing, fascinating, attractive	1	NA
Bagozzi and Khoshnevis (2022)	Brand coolness	Empirical	Mediating effect of brand coolness	Brand coolness positively mediates the effects of product quality on WOM	Subcultural, iconic, popular, high status, rebellious, positive autonomy, desirability	1	NA
Attiq et al. (2022)	Brand coolness	Empirical	Impact of brand coolness on brand love and brand engagement	Brand coolness increases brand love and brand engagement	Usability, reliability, originality, high status, personal cool	1	NA
Nan et al. (2022)	Brand coolness	Empirical	Impact of coolness on satisfaction	Brand coolness's attractiveness and uniqueness increase satisfaction but not subculture	Attractiveness, subculture, uniqueness	1	NA
Amenuvor et al. (2023)	Brand coolness	Empirical	Effect of coolness on brand connection and commitment	Brand coolness increases brand connection and commitment	Rebellious, usability, desirability, hedonic quality, aesthetics	1	NA
Koskie and Locander (2023)	Brand coolness	Empirical	Effect of brand coolness on willingness to pay	Brand coolness increases customers' willingness to pay	Subcultural, popular	1	NA
Lv et al. (2024)	Product coolness	Empirical	Effect of coolness on purchase intention	Product coolness increases purchase intention	Utility, attractiveness, originality, subcultural appeal	1	NA
Feng et al. (2024)	Brand coolness	Empirical /Experiment	Effect of brand coolness on consumers' preferences	Brand coolness increases consumers' preferences	Authenticity, rebelliousness, autonomy	1	NA
Bagozzi and Batra (2025)	Brand coolness	Empirical	Shorter but psychometrically sound scale for brand coolness	20-item scale fits well with 10-factor confirmatory factor analysis model by Warren et al. (2019)	Positive autonomy, rebellious, desirability, iconic, subcultural, popular, high status	1	NA

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Web Appendix B
Pilot Study 1A– Full Methodology and Results

Method

  Participants. The study uses two online panels: a panel of 207 respondents from the U.S. and a panel of 177 respondents from the U.K. The U.S. panel consists of undergraduate students from a large university, who participate in the survey in exchange for course credit. The U.K. panel consists of graduate students (68% females, median age group 31-35), who participate in the survey in exchange for being entered into a sweepstakes. The use of respondent samples from two different English-speaking countries and different demographics ensures some robustness of the preliminary findings about product coolness.

  Instrument. All the questions in the survey have an open-ended format. The survey first asks participants to indicate the top three products they consider to be cool (i.e., "What do you see as the top 3 coolest products? Why?"). Consistent with prior literature, this question is meant to help respondents recall concrete instances of cool products, to activate their perceptions of coolness (e.g., Warren and Campbell 2014). We subsequently ask them to report how they interpret the meaning of product coolness. Since the idea of interpreting the meaning of a construct may be too abstract for respondents, we use two differently-worded questions to tap into respondents' interpretations. Specifically, we ask them to indicate (1) their definition of product coolness (i.e., "How do you define product 'coolness'?"), and (2) the determinants that trigger a product's coolness (i.e., "When do products start to be cool?"). We purposefully worded these questions in a way that allowed respondents to think about coolness both in terms of its personal meaning to them, and in terms of the more generally defining characteristics that separate coolness from a lack of coolness. The instrument also collects some additional measures that are not reported here for brevity, and not used in further analyses. Following the data collection, two trained coders

manually coded the responses to these open-ended questions and assigned them to a set of categories that emerged based on the participants' answers. Inter-coder reliability was high, indicating strong agreement (Cohen's Kappa = .82); differences in scores were resolved by averaging coders' responses.

Results

The Definition of Product Coolness. When asked to define product coolness, the vast majority of respondents in either sample do not provide an actual definition. Instead, they generally indicate one or more attributes, which, if present in a product, would make the product appear cool. Seventy percent of US and 85% of UK respondents indicated at least one product attribute when attempting to define product coolness. We coded the open ended-responses into categories of attributes, with the most frequently mentioned product attributes shown in Table 1 below. We observe a strong similarity between the distribution of responses across the U.S. and the U.K. samples, whereby the ranking of the five most frequently noted product attributes is identical across the two samples (see Table 1)[1].. For theoretical grounding, we mapped the highest-ranking items against the list of product features developed by Pollay (1983) for cross-cultural research. This list has been employed in various cross-cultural studies that associate product appeals (i.e., features that make a product appear 'good') with specific cultural values (e.g., Belk, Bryce, and Pollay 1985; Emery and Tian 2009). With the exception of 'high-quality,' which can be mapped against multiple product features, all final items were successfully mapped against this list. They are also largely consistent with several product attributes used in other research on product coolness, particularly in Sundar et al. (2014) and Warren et al. (2019).

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[1] Several remaining attributes—such as *delivering a fun experience*, *being affordable or accessible, or being environmentally friendly*—are mentioned by less than 10% of respondents in either group, and were not included in further analyses.

Table 1
Pilot Study 1A - Responses to the Open-Ended Questions

Coolness-Related Product Attributes (derived from question **"How do you define product coolness?"**)		U.S. (*N* = 208)	U.K. (*N* = 177)
Product Attribute	*Corresponding Product Appeal from Pollay (1983)*		
Design/style/visual attractiveness/sleekness	Ornate (pretty)	44%	43%
Uniqueness/novelty/creativity/interestingness	Distinctive (rare)	33%	30%
Features/usefulness/functionality/practicality	Effective (practical)	30%	29%
Aspirational image/exclusivity	Dear (expensive)	22%	24%
Ease-of-use	Convenient (handy)	20%	25%
Trendiness/fashionable/contemporary/popular	Modern (new)/Popular	13%	7%
High quality/performance	[*Multiple Appeals*]	6%	10%
Interpretations of Coolness (derived from question **"When do products start to be cool?"**)		**U.S.**	**U.K.**
Coolness as determined by a product's intrinsic value		28%	25%
Coolness as determined by a product's social value			
• Popularity/trendiness/the social approval of others		41%	21%
• Association with an influential reference group		11%	17%
• Ownership enhances one's social image		5%	8%
Coolness as determined by a product's subjective value			
• Likeability/satisfies needs or dreams/pleasant to use		22%	29%
Coolness as determined by a product's marketing/branding-induced value		6%	7%

The Interpretation of Product Coolness. While the question related to the definition of coolness produced responses that were heavily focused on the product attributes that drive coolness, the second open-ended question ("When do products start being cool?") produced a wider range of responses. Respondents listed several determinants (both product- and non-product related) that were seen as triggering the emergence of coolness in a product[2].

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[2] Eighteen respondents in the U.S. sample and 15 respondents in the U.K. sample interpreted the question used here ("When do products start being cool?") to refer to the temporal point at which coolness emerges (e.g., upon product launch), rather than what it is that determines coolness. As a result, those responses were eliminated from that analysis, bringing the total of usable responses down to 192 for the U.S. sample and 165 for the U.K. sample.

The coding of the open-ended responses revealed four sets of such determinants, which are fairly consistent across the two samples. The determinants are discussed based on the frequency of mentions. The first determinant pertains to coolness stemming from the presence of desirable product merits that add an intrinsic, universally-recognized value to the product. It includes statements such as "when they revolutionize the way the world works" or "when they go beyond fulfilling a need and they add extra benefits or features […]." The second pertains to coolness stemming from the social validation associated with the product. Specifically, participants mention that a product is cool when it is embraced by other consumers and becomes popular (e.g., "when the majority thinks it is cool," "when they become part of a trend"), bestows a social benefit on the user (e.g., "owning a cool product makes a person think that he or she is special," "having it makes a positive statement about the consumer"), or is associated with an influential social group (e.g., "the "cool" kids in school have them," "when all the teenagers want them"). The third pertains to coolness stemming from the subjectively perceived value offered by a product. It suggests that the extent to which a product can fulfill or satisfy a consumer need or want determines its coolness. It indicates that a product is cool "when I want one," "(when) you can identify your taste, interest, etc. with it," "when I find it hard to live without them." The fourth pertains to coolness stemming from the value of a product as bestowed through marketing or branding activities (e.g., "after a good advertisement which presents the product in a cool way," "cars can be cool well before they are available because there are pictures of them in magazines and on the internet," "when the brand is perceived as cool,").

Cross-Sample Comparison. A series of ANOVAs indicates that mentions of the *coolness-related product attributes* shown in Table 1 do not differ between the two samples, with the exception of *trendiness/fashionable/contemporary/popular*, which scored marginally higher in the

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US compared to the UK sample ($F(1, 383) = 3.27$, $p = .071$, partial eta-squared = .008). Similarly, mentions of the *interpretations of coolness* do not differ, with the exception of *popularity*, which scored significantly higher in the US compared to the UK sample ($F(1, 344) = 6.51$, $p = .011$, partial eta-squared = .019).

Overall, in both the US and the UK, consumers interpret a product's coolness as emerging when the product provides some form of intrinsic, social, subjective, and/or marketing-driven value.   In general, the four categories appear to map onto the two interpretations of coolness discussed in the paper's theory section: a social, identity-signaling based interpretation (comprised of the social and the marketing-related value), and the more personally constructed interpretation that occurs independently of the social context (comprised of the intrinsic and the subjectively perceived value). The different coolness-related attributes and coolness interpretations show substantial consistency across the samples from the two cultures.

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Web Appendix C

Study 1B– Full Results

Interpretations of Product Coolness. An EFA with Direct Oblimin rotation on the pool of items reflecting the potential interpretations of coolness reveals a two-factor solution that is robust across the two samples. The solution contains 10 items (out of the original set of 23 items), each with a factor loading of at least .7 and a cross-factor loading below .3, see Table 2 below.

Table 2
Study 1B: Loadings of the Final Set of Items for Measuring Product Coolness Interpretations

Items	General Population Sample (Mturk) ($N = 248$)		Student Sample ($N = 136$)	
	Social Interpretation (*SIC*)	Personal Interpretation (*PIC*)	Social Interpretation (*PIC*)	Personal Interpretation (*SIC*)
A product is cool when …				
cool people buy it.	**.89**	-.00	**.85**	-.05
it is perceived as cool by most people.	**.89**	.04	**.85**	.00
it is endorsed by people who are trendsetters.	**.88**	-.08	**.85**	-.08
it starts a popular trend.	**.86**	.03	**.79**	.15
it is associated with a cool brand.	**.85**	.11	**.78**	.18
it is used or endorsed by celebrities.	**.82**	-.10	**.83**	-.14
it makes me happy when I use it.	-.10	**.76**	-.09	**.81**
I find it exciting or fun to use.	.04	**.83**	-.06	**.80**
it possesses outstanding attributes.	.04	**.80**	.14	**.77**
it has one or more admirable qualities.	.01	**.78**	.04	**.77**

The solution explains 69% of the total variance in the student population sample and 71% of the total variance in the general population sample, indicating that the proposed two factors cover a substantial amount of variability in the original set of items. The two factors map very clearly onto the *Personal* versus the *Social Interpretation* of product coolness. The *Personal Interpretation* of *Coolnes*s (*PIC*) represents a combination of the subjective and intrinsic value identified in the Pilot Study 1A. It includes two items that refer to the product being endowed with

superior characteristics that elicit admiration (i.e., "it possesses outstanding attributes" and "it has one or more admirable qualities"), and two that refer to the emotional rewards one experiences through product usage, with an emphasis on excitement (i.e., "it makes me happy when I use it" and "I find it exciting or fun to use"); α's = .80. The *Social Interpretation* of Coolness (*SIC*) represents a broad combination of the social and the marketing-driven value identified in Study 1A. It contains items referring to the product being popularly accepted as cool (i.e., "it starts a popular trend," "it is perceived as cool by most people") or being associated with a cool/aspirational reference group ("cool people buy it," "it is endorsed by people who are trendsetters," "it is used or endorsed by celebrities") or brand ("it is associated with a cool brand"); α's =.91 and .93. Across both interpretations, the items are phrased in such a way that each item by itself can theoretically function as a sufficient condition for a product to be considered cool. There is no correlation between *PIC* and *SIC* in the general population sample (r = -.05, p = .248), though there is a weak one in the student sample (r = .26, p = .002). Overall, these results suggest that the two interpretations represent statistically distinct factors.

Next, we investigate the reliability of the developed scale. Based on the results obtained in the Pilot Study, we expect *PIC* to be rated higher than *SIC*. That is indeed what we find. In each sample, respondents agree with *PIC* significantly more than with *SIC* (general population sample: $M_{Personal}$ = 5.83 (.95), M_{Social} = 4.35 (1.74); $F(1, 247)$ = 131.48, $p < .001$, partial eta-squared = .347; student sample: $M_{Personal}$ = 5.92 (.86), M_{Social} = 5.43 (1.30); ($F(1, 135)$ = 17.28, $p < .001$, partial eta-squared = .114), demonstrating that the developed scale provides robust results across different samples.

Differences between the Two Product Coolness Interpretations. We next examine whether the different interpretations of coolness have downstream implications in terms of the attributes

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associated with product coolness and coolness-related outcomes. Intuitively, one would expect *PIC* to be more closely associated with functional attributes (such as usability and *usefulness*) and *SIC* to be more closely associated with symbolic ones (such as *aesthetics* or *exclusivity*) and with *negative stereotypes*. No particular prediction can be made regarding the *desirability of cool products* or the directionality of the relationship between the *coolness interpretation* and specific coolness-related attributes. Since *PIC* and *SIC* reflect what coolness means to consumers, a consumer's tendency towards one versus the other could subsequently inform which product attributes are more closely linked to coolness in that consumer's mind. This latter approach would be consistent with previous research on brand coolness, which employs a reflective model of coolness (see Warren et al., 2019). Alternatively, since respondents in the Pilot Study 1A overwhelmingly define coolness on the basis of product attributes, and since the *product coolness interpretations* operate at a somewhat higher level of abstraction than product attributes, it is conceivable that the product attribute(s) that a consumers most closely associates with coolness could determine which product *coolness interpretation* is favored (though other, non-product-related bases for those interpretations likely exist, too). Since it is difficult to assert whether the *coolness interpretations* causally precede the coolness-related attributes or vice versa, we elect to represent the relationship between these two types of elements as a pattern of correlations rather than causation.

To test our predictions regarding the various associations, for each respondent we compute their *tendency towards PIC versus SIC* (i.e., the difference score between their *PIC* and *SIC* ratings, whereby a positive score indicates a tendency towards *PIC* a negative score indicates a tendency towards *SIC*, and a score of 0 indicates that *PIC* and *SIC* are equally preferred). A series of correlation analyses between tendency towards *PIC* versus *SIC*, the product attributes associated

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with coolness, and consumers' beliefs about cool products reveal a fairly robust pattern across the two samples. In both samples, tendency towards *PIC* versus *SIC* is negatively associated with *aesthetics* (student sample: *r = -.19, p = .021*; general population sample: *r = -.12, p = .046*) and *exclusivity* (student sample: *r = -.30, p < .001*; general population sample: *r = -.42, p < .001*), and —at least marginally significantly—positively associated with *usefulness/usability* (student sample: *r = .15, p = .066*; general population sample: *r = .46, p < .001*). Additionally, it is negatively associated with *negative stereotypes* (student sample: *r = -.24, p = .005*; general population sample: *r = -.44, p < .001*). Overall, these findings are consistent with our expectation about *tendency towards PIC versus SIC* being able to reliably distinguish between groups of consumers that differ in how closely they associate coolness with certain attributes (i.e., a *tendency towards SIC* correlates with higher ratings for *exclusivity* and *aesthetics* and lower ratings for *usefulness/usability*), and with *negative stereotypes* (i.e., a *tendency towards SIC* correlates with stronger *negative stereotypes* against cool products).

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Web Appendix D
Study 3 – Demographic Distribution of the Sample

The table below shows the demographic distribution of the Study 3 sample, along with the corresponding national census data for each country (obtained from www.census.gov and www.statista.com). We aimed to have samples that are representative of each country's population on gender and age. To ensure that the samples are adequate representations of the three cultures we are investigating, for Germany and China we included only respondents whose ethnicity matched our specified cultures (i.e., only German respondents in the Germany sample, and only Han Chinese respondents in the China sample). For the US, we focused on matching the percentage of Caucasian respondents (71.9%) against that of the general population (72%), and did not include Asian/Pacific Islanders in the sample, so as not to create an overlap with the China sample.

Table 3
Demographic Distribution of the Sample in Study 3

	US		Germany		China	
	Current Sample (N = 32)	2019 Census	Current Sample (N = 33)	2019 Census	Current Sample (N = 35)	2019 Census
Female	56.3%	51.5%	51.5%	51%	48.6%	48.91%
Median age	35-44	38.1	35-44	47.8	35-44	37
Ethnicity						
White/Caucasian, non-Hispanic	71.9%	72%	*German*		*Han Chinese*	
Black, non-Hispanic	9.4%	13%				
Hispanic/Latino,	3.1%	18%				
American Indian/Alaskan Native	3.1%	1%				
Mixed	6.3%	1%				

Web Appendix E

Study 3 – Scale items Used for Measuring Cultural Values/Dimensions

Measure	Source	Items
Individualism vs. Collectivism	Yoo et al. (2011) - CVSCALE	• Individuals should stick with the group even through difficulties. • The wellbeing of the group is more important than individual rewards. • The success of the group is more important than individuals' successes.st • Individuals should only pursue their goals after considering the welfare of the group. • Group loyalty should be encouraged even if individual goals suffer.
Achievement vs. Ascription	Smith, Dugan, and Trompenaars (1996)	• The most important thing in life is to think and act in the ways that best suit the way you really are, even if you don't get things done. • The respect a person gets is highly dependent on the family out of which they come. • When someone is born, the success they are going to have is already in the cards, so they might as well accept it and not fight against it. • A child should be taught from infancy to be more gentle with women than with men. • It is important for managers to be older than most of their subordinates. • Older people should be more respected than younger people.
Indulgence vs. Restraint	Hofstede and Minkov (2013) - Value Survey Module (first 5 items); Ein-Gar and Sajiv (2014) - Dispositional Self-Control Scale (remaining items)	• In my private life, is it important for me to keep time free for fun. • In life, it is important to do things in moderation, not in excess. • In life I value having few desires, rather than many. • I often feel that other people or circumstances prevent me from doing what I really want to do. • I generally consider myself a happy person. • Even when something exciting happens to me, I do not get carried away by my feelings or act without thinking. • Even when I am stressed, most of the decisions I make are considered and calculated. • I rarely act impulsively. • Usually, when something tempts me, I manage to hold out. • I usually succeed in overcoming temptations.
Short vs. Long-Term Orientation	Hofstede and Minkov (2013) - Value Survey Module (first 4 items); Yoo et al. (2011) – CVSCALE (remaining items)	• In life I place high value on doing acts of service for my friends. • In life I value being thrifty (i.e., not spending more than needed). • I consider myself proud to be a citizen of my country. • I believe that persistent efforts are the surest way to results. • I place high value on the careful management of money. • In life I value long-term planning. • In life I value personal steadiness and stability. • I believe it's worth giving up today's fun for the sake of achieving success in the future. • It's important to work hard in order to achieve success in life.
Association of Coolness with the US		• When I hear the word 'cool,' it makes me think about American people, places, or things. • I strongly associate the notion of 'cool' products with things that come from the U.S. • If 'coolness' is best embodied by a particular country, that country is the United States. • For me, the concept of 'coolness' is not tied to any specific country or culture.

Note: All items measure agreement on a scale from 1 (not at all) to 7 (extremely)