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RESEARCH ARTICLE

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The chameleon in consumers: Development and validation of a scale to measure Consumers' Cognitive Flexibility

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Abstract

This paper introduces a new scale, the Consumers' Cognitive Flexibility Scale (CCF-Scale). Consumers' Cognitive Flexibility (CCF) is conceptualized as the adaptation to changes in the environment and to product options by exhibiting flexible thoughts, feelings, and actions. This scale is a new measure of consumers' mental capabilities to understand and evaluate unknown products. Especially, really new products (RNPs) are highly innovative and different from well-known products in the market. A flexible mindset can help integrate RNPs into existing knowledge structures. The CCF-Scale was developed and tested with four prestudies and four representative studies with 1057, 696, 494 German, and 506 US consumers. The prestudies were used to ensure face and content validity and to select products for criterion validity. The findings demonstrate a reliable and valid scale in both countries consisting of 14 items with three CCF-facets: *Coping* (with consumption problems), *Perspective* (change for product/information evaluation), and *Alignment* (to changes in the environment). Results show that the CCF-facets help explain RNP-acceptance across different categories (e.g., food, furniture, and digital services). One limitation is the article's focus on RNPs. Still, marketers can use these findings to adjust instructions on how to use RNPs and to communicate more effectively, for example by using analogies.

KEYWORDS
cognitive flexibility, consumer innovativeness, innovation acceptance, measurement, really new products, RNPs, scale development

1 | INTRODUCTION

Flexibility has long since been a crucial factor for survival. This principle applies to both companies and consumers. Consumers must especially show flexibility when confronted with unknown products, such as innovations that promise unique benefits but often require consumers to adjust their behavior (Gourville, 2006). Innovations that require most behavioral change and do not fit in any existing product category are radical innovations or really new products (RNPs) (Feurer et al., 2021). A recent systematic review by Feurer et al. (2021) shows that many aspects influence consumers' reactions toward RNPs, such as consumer-related variables (e.g., consumer innovativeness) and situational factors arising from the environment. Still, the authors call for more research investigating how the different aspects interact. Our research answers this call by introducing a new method for measuring a crucial mental capability,

Consumers' Cognitive Flexibility (CCF), and by relating this to other consumer-related factors for RNP-acceptance.

RNPs are highly incongruent to existing mental categories. Thus, consumers require more cognitive effort to classify RNPs into existing mental structures (Moreau et al., 2001). As stated by Jhang et al. (2012), "products […] are extremely incongruent because of an attribute that departs radically from consumer expectations for the category" (p. 257). Research shows that enhancing cognitive flexibility—the ability to link and switch between different mental categories—can be beneficial in solving incongruence and might lead to a more positive assessment of RNPs (e.g., Jhang et al., 2012). Until now, consumer research has focused mainly on techniques such as priming to enhance and influence cognitive flexibility (e.g., Emich & Pyone, 2018; Jhang et al., 2012) and has rarely investigated the general predisposition of consumers. However, a group of psychology researchers pointed out that cognitive flexibility is an ability that is not homogeneous across all individuals (Braem & Egner, 2018; Dennis & Vander Wal, 2010; Martin & Rubin, 1995). In fact, studies show that different levels of cognitive flexibility can explain why some people solve problems more efficiently, perceive situations from multiple angles, and adapt better to change (e.g., Bishop et al., 2004; Chesebro & Martin, 2003; Chung et al., 2012; Dennis & Vander Wal, 2010; Martin & Rubin, 1995).

We hypothesize that one crucial mental capability of consumers to understand and evaluate RNPs is a consumer-specific type of cognitive flexibility, namely CCF. To measure this construct, we present a new scale, the Consumers' Cognitive Flexibility Scale (CCF-Scale) and relate it to RNP-acceptance. We are aware of two measurements for cognitive flexibility in psychology that have partly been used in the marketing literature: The Cognitive Flexibility Scale (Martin & Rubin, 1995), which focuses on communication competencies, and the Cognitive Flexibility Inventory (Dennis & Vander Wal, 2010), which describes how individuals find explanations for life events. These two scales do not fully capture consumer behavior when confronted with new products (such as RNPs). We reached this conclusion by comparing the construct definition of the two mentioned scales with the definition of consumer behavior. This definition highlights that consumer behavior is "the dynamic interaction of affect and cognition, behavior, and the environment by which human beings conduct the exchange aspects of their lives" (Bennett, 1995, p. 59). Thus, consumers interact with their environment on three distinct levels: thoughts, feelings, and actions. The two scales measuring cognitive flexibility in psychology are one- and two-factor scales that do not differentiate these three dimensions, which are crucial in measuring CCF from our perspective. The need for a new measure in consumer research has also been mentioned by Hagtvedt and Patrick (2008): "perhaps other measures may be developed that can better capture this construct [cognitive flexibility]" (p. 220). Wu et al. (2024) also call for a new measurement as they state, "perhaps future research could develop other tasks […] or even provide neural-based evidence for the underlying mechanism of cognitive flexibility in our context" (p. 9). All these aspects strengthen the need for a new scale measuring cognitive flexibility in consumer research. We aim to close this gap by presenting a valid and reliable scale to measure distinct levels of CCF across consumers and embed it into a nomological network, as summarized in Figure 1.

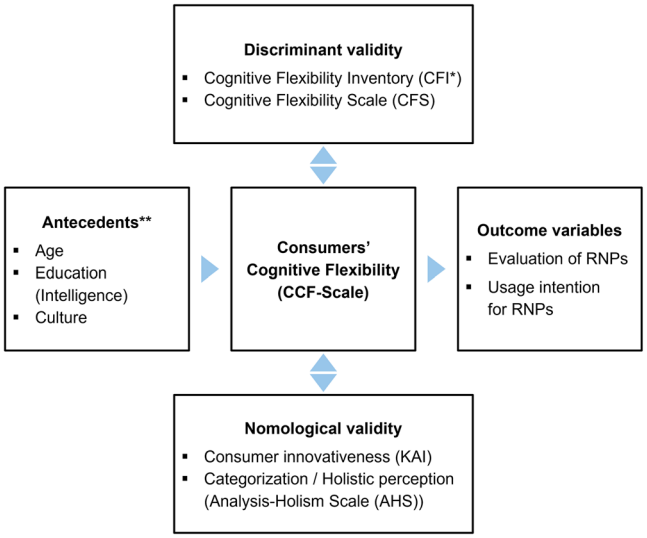

FIGURE 1 Nomological network of the CCF-Scale. *Measurement scale for each construct in parentheses. **Antecedents suggested based on previous cognitive flexibility research in marketing. CCF-Scale, Consumers' Cognitive Flexibility Scale.

Thus, with our present research, we pose the following research question:

How reliable and valid is the CCF-Scale in measuring distinct levels of CCF?

More detailed, we answer the following sub-research questions:

1. How different is CCF from other cognitive flexibility constructs from psychology? (discriminant validity)
2. How different is CCF from related but distinct constructs such as consumer innovativeness? (nomological validity)
3. To what extent does a higher level of CCF increase RNP-acceptance? (predictive validity)
4. How reliable and valid is the CCF-Scale in a different country?

2 | LITERATURE REVIEW

2.1 | Cognitive flexibility in psychology

The psychological construct of cognitive flexibility is described as an individual's ability to consider a variety of representations for an idea, object or event by easily shifting between them based on the stimuli in the environment (Jhang et al., 2012; Scott, 1962). Cognitive flexibility is also described as the human ability to perceive a situation from different perspectives and to adjust the behavior accordingly (Martin & Rubin, 1995). Substantial research in psychology led to various results as presented in Table 1.

TABLE 1 Findings from psychological research on cognitive flexibility.

Source (selection)	Study results on cognitive flexibility	Implications for CCF
Bishop et al. (2004); Hofmann et al. (2012)	Higher cognitive flexibility supports an individual's goal pursuit, as it helps to shift attention from one object or goal to another.	Individuals with higher CCF keep their goals in mind and stay focused also in unpredictable situations (e.g., innovative products to reach the goal of sustainable consumption).
Chung et al. (2012); Odacı and Cikrikci (2019)	Higher cognitive flexibility leads to more openness toward organizational change and new experiences.	Individuals with higher CCF are more open to new products and consumption experiences.
Chesebro and Martin (2003); Martin and Rubin (1995)	Higher cognitive flexibility leads to more empathetic analyses in communication, thereby enhancing social interactions.	Individuals with higher CCF shift more easily between different message types on products or advertisements (e.g., product information vs. marketing claims).
Dennis and Vander Wal (2010); Emich and Pyone (2018)	Higher cognitive flexibility can lead to a more holistic perception of situations as individuals consider multiple perspectives.	Individuals with higher CCF tend to value consumption experiences more as they perceive negative events from multiple angles and remain calm in stressful/unexpected consumption situations (e.g., products out of stock).
Shao et al. (2018)	Cognitive flexibility is related to creative thought processes.	Individuals with higher CCF show creativity in the usage and application of products.

Note: Own illustration.

Abbreviation: CCF, Consumers' Cognitive Flexibility.

We used these findings from psychological research to derive implications for the CCF construct, which can be clustered as follows: (1) Thoughts: communication competence and ease of reading between the lines; (2) Actions/feelings: openness and acceptance of changes by adjusting own behavior; (3) Thoughts: creative problem solving; and (4) Actions/feelings: goal-oriented, focused behavior. Those four facets were used for the construct definition and the item development process. We ensured that the facets align with the definition of consumer behavior (Bennett, 1995). With this, we differentiate the CCF-Scale from existing cognitive flexibility scales in psychology.

2.2 | Relevance of cognitive flexibility in consumer research

While the concept of cognitive flexibility has been widely investigated in psychology, its influence on consumer behavior requires more investigation. In addition, a suitable measurement for CCF is needed. This conclusion has been reached after a literature review searching for cognitive flexibility studies in leading marketing journals (see Supporting Information S1 for an overview). We identified 17 papers that can be divided into four groups:

1. Studies that measure cognitive flexibility using one of the two above-mentioned scales in an abridged or adjusted version, often after manipulation (e.g., Bullard et al., 2019; Özyörük, 2022). For example, Bullard et al. (2019) use both scales from psychology and a puzzle task to measure cognitive flexibility. Still, the authors do not use the measurements for a general predisposition and calculate a composite score, which does not reflect the two-factor structure of the Cognitive Flexibility Inventory (Dennis & Vander Wal, 2010).
2. Studies that manipulate cognitive flexibility without any subsequent measurement (Emich & Pyone, 2018; Jhang et al., 2012). Jhang et al. (2012) demonstrate that an ease in evaluating incongruent products can be achieved by influencing and increasing cognitive flexibility. The authors used primes and no measurement.
3. Studies that assume a certain level of cognitive flexibility based on related constructs (e.g., intelligence and mood) without measuring cognitive flexibility (e.g., Aspara et al., 2017; Pyone & Isen, 2011).
4. Studies that use other measurement methods (e.g., categorization, word-associations) (e.g., Hagtvedt & Patrick, 2008; Wu et al., 2024).

The existing marketing literature on cognitive flexibility focuses on areas such as brand extensions, price and cost evaluations, paradox brands, and innovations. These studies have in common that consumers are confronted with some level of incongruence (e.g., brands or products that behave differently than expected). We observe that solving incongruence is the common theme across marketing studies on cognitive flexibility. Based on the schema-congruity theory, an object is perceived as incongruent if its properties are inconsistent with objects in the activated mental category. In this case, a person requires more cognitive effort to integrate the unknown object into existing mental categories (Mandler, 1982). Slightly incongruent objects tend to arouse humans and lead to a positive evaluation, particularly when compared to fully congruent objects (Meyers-Levy & Tybout, 1989). This is not the case for highly incongruent objects, as they challenge a person's existing categories and are often evaluated negatively (Mandler, 1982; Meyers-Levy & Tybout, 1989). A prototype for incongruence in marketing is a RNP, as it differs most from well-known categories (Feurer et al., 2021). Jhang et al. (2012) introduce cognitive flexibility as a factor that improves the assessment of RNPs. Therefore, we focus on RNPs as exemplary products to test for criterion validity.

Research has investigated several factors influencing consumers' responses to RNPs (Feurer et al., 2021). CCF can be seen as a personal processing characteristic that is like other consumer-specific variables (e.g., consumer innovativeness) an essential factor for RNP-acceptance. To embed our scale into a nomological network, we also measure consumer innovativeness (Kirton, 1976) and broader categorization/holistic perception (Choi et al., 2007), both factors that have been shown to be related to cognitive flexibility and RNP-acceptance (Feurer et al., 2021; Özyörük, 2022).

3 | CONSTRUCT DEVELOPMENT AND DIMENSIONALITY

Based on the findings from psychology and marketing, we see the need to measure distinct levels of CCF. To develop a precise construct definition, we follow the guidelines mentioned by Clark and Watson (1995) and review literature dealing with related constructs. The two most common scales from psychology that have been used in both disciplines are the Cognitive Flexibility Scale, which defines cognitive flexibility as "a person's (a) awareness that in any given situation there are options and alternatives available, (b) willingness to be flexible and adapt to the situation, and (c) self-efficacy in being flexible" (Martin & Rubin, 1995, p. 623) and the Cognitive Flexibility Inventory. The latter is rarely used in marketing and consumer research (see Supporting Information S1 for details) and measures the following: "Aspects of cognitive flexibility that enable individuals to think adaptively rather than maladaptively when encountering stressful life events. Three aspects of cognitive flexibility were hypothesized to be necessary for this: (a) the tendency to perceive difficult situations as controllable; (b) the ability to perceive multiple alternative explanations for life occurrences and human behavior; [...] (c) the ability to generate multiple alternative solutions to difficult situations" (Dennis & Vander Wal, 2010, p. 243).

The two constructs focus on social interaction and behavior in stressful situations. However, more needs to be considered for consumers to create a holistic measurement of cognitive flexibility along the purchasing process. Based on the construct definition, both scales focus on perception and ability to come up with solutions in difficult situations but lack the vital dimension of feelings. As mentioned by Bennett (1995) thoughts, feelings, and actions are crucial for consumers interacting with the environment. Therefore, we develop a more consumer-specific construct definition, which is conceptualized as follows:

> *CCF is a consumer's ability to adapt to the dynamic environment and the continuous launch of new products by exhibiting flexible thoughts, feelings, and actions during the purchasing process.*

We constructed the CCF-Scale that measures the CCF construct as a multidimensional profile model with distinct facets (e.g., a consumer can be cognitively flexible in dealing with feelings but might not be flexible in behavior). Thus, the facets cannot be combined into an overall score (Law et al., 1998).

4 | SCALE DEVELOPMENT PROCESS AND PRELIMINARY STUDIES

We followed the well-established scale development procedure by DeVellis (2017) and guidelines for scale development from consumer research (Anderson & Gerbing, 1988; Bagozzi et al., 1991; Churchill, 1979; Netemeyer et al., 2003) (see Supporting Information: Appendix A1 for the illustrated scale development process).

4.1 | Item generation process

Based on the construct definition, we prepared a pool of items. The two existing scales from psychology (Dennis & Vander Wal, 2010; Martin & Rubin, 1995) were valuable input. As shown in the literature review, these two scales are partly used for measuring cognitive flexibility in marketing. We analyzed the scales and their shortcomings for consumer research. Psychological studies dealing with the effects of cognitive flexibility (see Table 1) and consumer behavior literature related to innovation acceptance were used during the item generation process (e.g., Raju, 1980; Wood & Swait, 2002). The process led to 52 items covering all phases of the purchasing process. This item pool was used as a basis for the following studies to purify and finalize the CCF-Scale.

4.2 | Prestudy 1: Discussion with experts for content validity

4.2.1 | Method

We discussed the final pool of 52 items with nine international consumer behavior and marketing experts to ensure content validity (Boateng et al., 2018). The experts were selected based on their expertize in consumer research, sustainable consumption, and product development. The group received the set of items with additional project information before the discussion. The experts evaluated each item's suitability to reflect CCF. Based on the feedback, we immediately discussed adjustments.

4.2.2 | Results

Based on the experts' feedback, we rephrased 15 items to avoid misunderstandings. Six items were removed from the item pool, as the experts found they did not cover CCF appropriately. We compared the scale items to other existing scales and removed four additional items as they were not distinguishable from other constructs. Prestudy 1 led to a reduced CCF-Scale consisting of 42

items (see Supporting Information S1 for an overview of the original item pool).

4.3 | Prestudy 2: Cognitive pretesting with target audience for face validity

4.3.1 | Method

To ensure face validity (Boateng et al., 2018), we conducted a cognitive pretest with 10 German participants (70% female; $M_{Age} = 43.30$, $SD_{Age} = 16.47$) for the remaining 42 items using the Think-Aloud method. The interviews were held in German. Participants had to read aloud each of the 42 items and verbalize everything the item brought to mind, which helped to detect ambiguous or difficult-to-understand items (Lenzner et al., 2015). All cognitive pretests were individually conducted, recorded, and took place either by phone or in person in quiet surroundings. We evaluated the performance of each item by implementing a code system for ease of understanding, the time needed to answer the item, the item's fit to the context of consumer behavior, and the quality of the respondents' answers. Poor answer quality also indicated misunderstanding (see Supporting Information S1 for details).

4.3.2 | Results

With the code system, we identified 16 problematic items, which were removed from the CCF-Scale, resulting in a shortened scale of 26 items. Seven items remained unchanged, while 19 were rephrased and shortened for easier understanding. During the process of rephrasing, we double-checked that all expected facets of CCF were still measurable by a minimum of three items (DeVellis, 2017).

4.4 | Prestudies 3 and 4: Presentation of RNPs

4.4.1 | Method

Studies 1 and 2 focused on regularly purchased products defined as convenience goods (Definitions Committee American Marketing Association, 1948). We chose food products, as many RNPs have been developed in the market over the last few years (e.g., in vitro meat), and research on food RNPs still requires more investigation (Siegrist & Hartmann, 2020). We developed different food RNPs and presented these to 80 German participants between 18 and 70 years old (58.8% female) in an online survey in November 2020. Participants had to rate the innovativeness of each product ranging from one to eight, where a higher number indicated higher perceived innovativeness.

Studies 3 and 4 focused on shopping goods, which are bought more irregularly (Definitions Committee American Marketing Association, 1948) to generalize our findings. We developed advertisements for three different RNPs that are highly relevant today: an autonomous car, a self-cleaning sofa from algae, and an AI-based health app. Furthermore, we aimed for more generalizability and added a brand extension (a soft drink from a well-known high-tech brand). Thirty-two students between 20 and 29 years (81.3% female) from a German university evaluated the products based on their perceived innovativeness on a 7-point Likert scale in an online survey in February 2024 (see Supporting Information S1 for more details on prestudies).

4.4.2 | Results

We selected four of the eight presented products from Prestudy 3 to reduce participants' fatigue in the final survey. The four final RNPs for Studies 1 and 2 were meat, fish, and dairy products, which were innovative due to their packaging material, ingredients, or production process. All four food RNPs require consumers to adjust their behavior when storing, using, or recycling the products. For Prestudy 4, the students evaluated the different products as expected. The RNPs were assessed as more innovative ($M_{Car} = 4.99$; $M_{Sofa} = 4.79$; $M_{Health} = 5.68$) than the brand extension ($M_{Brand} = 2.33$). A paired t-test considering Bonferroni correction for each RNP and the brand extension confirmed that all pairs' differences are highly significant. All three RNPs and the brand extension were added to Studies 3 and 4 (see Supporting Information: Appendix A2 for final products).

5 | STUDY 1: EXPLORATORY FACTOR ANALYSIS, RELIABILITY, AND VALIDITY

5.1 | Method

Study 1 consisted of testing and purifying the 26-item CCF-Scale to identify the scale structure, assess reliability and criterion (predictive) validity concerning RNP-acceptance, and test whether the CCF-Scale is susceptible to socially desirable behavior. We tested the CCF-Scale using an online survey programmed in Qualtrics. We asked demographic questions before the participants could answer the 26 items shown in a randomized order. To test for criterion validity, we added the four innovative products from Prestudy 3 and asked respondents for their willingness to try these products on a 5-point Likert scale ranging from 1 (*Very unlikely*) to 5 (*Very likely*).

5.2 | Participants

A market research institute recruited a sample representative for the German population based on gender, age, and education in November 2020.[1] Participants were compensated for their participation, and a final sample of 1057 answers was used for the analysis (see Supporting Information: Appendix A3 for detailed sociodemographics).

[1] 51.8% female, between 18 and 70 years, low (25.7%), medium (33.3%), high (37.7%), and no education (3.3%).

5.3 | Results

5.3.1 | Principal component analysis of the CCF-Scale

We analyzed the data using IBM SPSS Statistics 28. The Kaiser–Meyer–Olkin-value of 0.871 with a significant Bartlett's Test of Sphericity ($\chi^2(325) = 6768.33$; $p < 0.001$) supported the data suitability to conduct a principal component analysis. We first examined the items' skew and kurtosis to test the assumption of normality, and no severe violation was detected (Byrne, 2016). We conducted a principal component analysis with orthogonal (varimax) rotation with all 26 items. Based on the theoretical concept, we expected a four-factor solution for the CCF-Scale. Kaiser's criterion suggested six factors to extract with eigenvalues greater than 1, while the scree plot led to a four-factor solution. Field (2018) suggests using the scree plot result instead of Kaiser's criterion if the sample size exceeds 300 cases for data sets with fewer than 30 variables and average communalities < 0.70. As our data set fulfilled these requirements and because of the theoretical concept, we followed this suggestion and selected the four-factor solution. In addition, we conducted Horn's parallel analysis, a more precise way to decide on the number of factors. The analysis supported the four-factor solution (Horn, 1965; Netemeyer et al., 2003).

We screened the rotated factor matrix to investigate which items and factors should be removed to reach the anticipated four-factor solution. Cutoff criteria to detect critical items were factor loadings < 0.40 (Guadagnoli & Velicer, 1988) or cross-loading items with loadings on more than one factor of >0.32 (Tabachnick & Fidell, 2014). Based on the suggestions of Field (2018) and Piedmont (2014), we decided to remove items with correlations < 0.30 to all other items in the correlation matrix, and items with extracted communalities < 0.40. Furthermore, we examined the factor reliability by computing Cronbach's α and investigated the inter-item correlation within a factor, which should have been >0.20. These aspects led to the removal of two factors with two and four items, respectively. Even though we were first expecting four factors, the fourth factor with two items showed low reliability ($\alpha = 0.36$) with an inter-item correlation < 0.30. In fact, this fourth factor consisted of items dealing with consumers' problem-solving ability, which was already covered by another factor. Because of this, we removed the fourth factor.

The process led to a reduced CCF-Scale of 14 items loading onto three factors. The solution explains 53.73% of the variance in the sample. The first two factors account for 44.66% variance, and the third factor for 9.08%. To ensure that the suggested factors are uncorrelated, we conducted the analysis again using oblique rotation. The components correlated with 0.35, 0.14, and −0.02. Tabachnick and Fidell (2014) suggest that one component correlation > 0.32 does not justify the need for an oblique rotation, and orthogonal rotation is sufficient. To demonstrate the superiority of the three-factor solution over a simple one-factor solution, we forced all 14 items onto one factor. This explains only 24.85% of the variance with weak factor loadings of <0.40 for five items. Therefore, we keep the three-factor solution. Table 2 shows the final 14 items, their factor loadings, and the high reliability (Taber, 2018) for each factor with 0.79 for *Coping*, 0.70 for *Perspective*, and 0.80 for *Alignment*. The item-total correlation of all three factors is >0.30 (Field, 2018), which also supports the reliability of the CCF-Scale.

The analysis revealed that three distinct facets reflect CCF, which we named *Coping*, *Perspective*, and *Alignment*.

1. *Coping:* This facet reflects CCF based on the feelings a consumer experiences when confronted with critical situations (e.g., large assortments, new product designs), how they cope with it, and how they control their feelings. Previous research has shown that a consumer who can cope with stressful situations shifts attention and regulates emotions more effectively (Bishop et al., 2004; Hofmann et al., 2012).
2. *Perspective:* This facet deals with how well a consumer reads between the lines and takes on different perspectives using flexible thought processes. CCF portrayed in this facet describes a consumer's ability to evaluate products and product information (e.g., marketing messages) from different angles.
3. *Alignment:* This facet consists of action items intended to measure a consumer's willingness to adjust to changes in the environment. Cognitive flexibility can enhance the ability to adapt to changes (Chung et al., 2012). CCF portrayed in this facet reflects a consumer's ability to adjust to new surroundings.

5.3.2 | Test on criterion validity

We used the factor scores to see if the CCF-Scale is related to RNP-acceptance (measured by the likelihood to try food RNPs). The three CCF-facets *Coping*, *Perspective* and *Alignment* correlated significantly with RNP-acceptance ($p < 0.01$), supporting criterion validity of the CCF-Scale. Surprisingly, *Coping* correlated negatively with RNP-acceptance ($r(1055) = -0.22$), while *Perspective* and *Alignment* both correlated positively ($r(1055) = 0.16$ for *Perspective* and $r(1055) = 0.19$ for *Alignment*).

For more evidence on criterion (predictive) validity, we divided respondents into three groups for each facet separately using a tertile split. The three groups represented the respondents who received lower, medium, and higher scores relative to others for each facet. With these groups, we conducted an analysis of variance (ANOVA) analysis. The results are illustrated in Figure 2.

Respondents with a high score for *Coping* were less likely to try the RNPs compared to those with a low score (Welch's $F(2, 697.79) = 22.07$, $p < 0.001$, $\omega^2 = 0.04$). No significant difference was detected between the medium and high groups. The pattern was similar when considering each product separately. For *Perspective*, consumers with a high score were significantly more likely to try the RNPs compared to those with a low score (Welch's $F(2, 700.49) = 10.74$, $p < 0.001$, $\omega^2 = 0.02$). No significant difference was detected between the medium and high groups. Respondents with a high level of *Alignment* were significantly more likely to try the

TABLE 2 Study 1—Dimensions and items of the CCF-Scale.

Dimensions and items	*M*	SD	Factor loading	*α*
Coping				
When it comes to new packaging for products, I am quickly overwhelmed.[a]	3.67	1.09	0.78	0.79
When I can't decide between two products, I quickly feel helpless.[a]	3.67	1.14	0.76	
The large product selection in stores overwhelms me.[a]	3.53	1.17	0.73	
It confuses me if my favorite brand changes the product design.[a]	3.25	1.20	0.69	
I always buy several of my favorite products because I am afraid it might be sold out at some point.[a]	3.48	1.18	0.60	
I am in despair if I search for a product in several stores without success.[a]	3.05	1.24	0.59	
Perspective				
I can easily distinguish between facts and advertising messages on product packaging.	3.68	0.91	0.72	0.70
I always have many ideas how to get information about unknown products.	3.45	0.97	0.68	
It is easy for me to detect different meanings in advertising messages.	3.41	0.95	0.67	
I appreciate all kinds of product experiences, even if they are negative.	3.41	0.96	0.66	
I am able to figure out how to use all products.	3.48	0.94	0.58	
Alignment				
Even when stores restructure their assortment, I quickly find what I am looking for.	3.32	1.02	0.84	0.80
I can easily find my way around a store that is unfamiliar to me.	3.38	1.01	0.82	
I can easily adapt to new shopping environments.	3.56	0.99	0.77	

Note: Extraction method: principal component analysis. Rotation method: varimax with Kaiser normalization. Rotation converged in 5 iterations.
α = Cronbach's alpha; instructions stated, "Please indicate to what extent the following statements apply to you. (Choose from '1 = *Strongly disagree*' to '5 = *Strongly agree*')" (see Supporting Information S1 for details on the measurement format).
[a]Reverse-coded items.

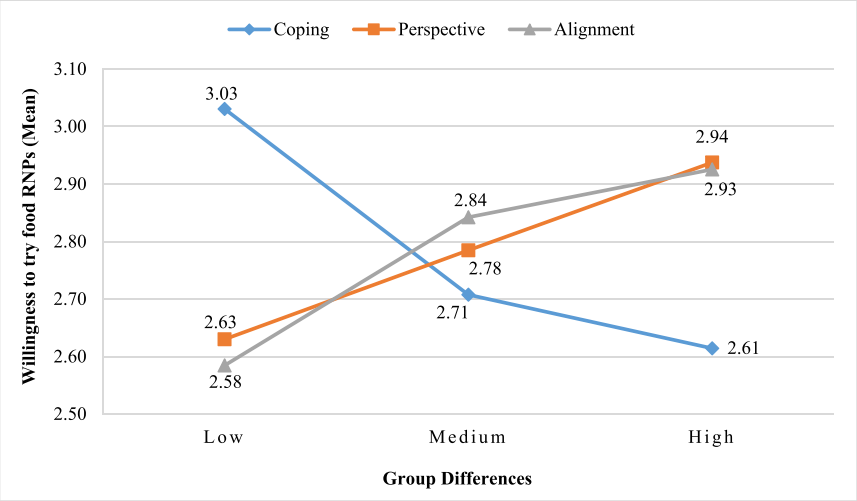

FIGURE 2 Group differences based on three CCF-facets. Higher willingness to try food RNPs points to higher RNP-acceptance. CCF, Consumers' Cognitive Flexibility; RNP, really new products.

products than those with a low score ($F(2, 1054) = 14.96$, $p < 0.001$, $\eta^2 = 0.03$). No significant difference was found between the medium and the high groups. Based on these findings, criterion validity is supported. The three facets can each be divided into three groups (low, medium, and high), predicting overall RNP-acceptance. *Perspective* and *Alignment* positively relate to RNP-acceptance, while the opposite is true for *Coping*.

5.4 | Discussion

Study 1 showed that consumers differ in their general predisposition of CCF. The principal component analysis revealed a 14-item scale with three CCF-facets: *Coping*, *Perspective* and *Alignment*. First reliability and validity tests answered our overall research question: The CCF-Scale is a valid and reliable tool for

measuring distinct levels of CCF. The ANOVA analysis addressed sub-research question 3. The three facets of CCF showed significant relationships with RNP-acceptance.[2] As expected, *Perspective* and *Alignment* positively relate to RNP-acceptance. The contrary is the case for *Coping*, which captures whether consumers can cope with difficult consumption situations by maintaining control over their feelings. The findings indicate that consumers with low *Coping* are more likely to try RNPs than consumers with high *Coping*. An explanation for this finding is that consumers with low *Coping* are easily overwhelmed by consumption problems and feel they lose control in such situations. We conducted a second study to better understand the results from Study 1 and to strengthen the validity and reliability of the CCF-Scale.

6 | STUDY 2: CONFIRMATORY FACTOR ANALYSIS, RELIABILITY, AND VALIDITY

6.1 | Method

Study 2 focused on retesting and confirming the scale structure, conducting more reliability and validity tests, especially on construct and predictive validity, and embedding the CCF-Scale into a first nomological network. Like Study 1, an online survey was programmed in Qualtrics. Respondents were asked to indicate demographic information before answering the purified 14-item CCF-Scale on a 5-point Likert scale, with items shown in a randomized order. We added the Cognitive Flexibility Scale (Martin & Rubin, 1995) and the Kirton Adoption-Innovation-Inventory (Kirton, 1976) to test for construct validity. We showed pictures of food RNPs to the participants and asked them if they were willing to try the products. In Study 2, we showed one meat and one dairy product.

6.2 | Participants

A market research institute recruited a sample representative for the German population based on gender, age, and education in July 2021.[3] Participants were compensated for their participation. We embedded predefined quality criteria (e.g., duration time) to ensure high data quality. Our final data set comprised 696 complete answers (see Supporting Information: Appendix A4 for detailed sociodemographics).

[2]As Study 1 focused on innovative food products, we considered the sample's dietary habits in the interpretation of results. As most participants (73.1%) indicated that they do not follow any specific diet, we assumed that dietary habits do not play a crucial role (see Supporting Information: Appendix A3 for details).

[3]50.4% female, between 18 and 70 years, low (29.9%), medium (31.9%), high (35.9%), and no education (2.3%).

6.3 | Results

6.3.1 | Confirmatory factor analysis of the CCF-Scale

We used IBM SPSS Statistics 28 and AMOS to analyze the data. The proposed measurement model from Study 1 was fitted with the three factors *Coping*, *Perspective*, and *Alignment*. The model was estimated using the Maximum Likelihood method and the fit indices indicated a very good fit ($\chi^2(74) = 196.513$; $p < 0.001$; comparative fit index [CFI] = 0.959; root mean square error of approximation [RMSEA] = 0.049; standardized root mean square residual [SRMR] = 0.039) with factor loadings > 0.40. All three factors are highly reliable with Cronbach's α of 0.80 for *Coping*, 0.72 for *Perspective*, and 0.86 for *Alignment*. We calculated the average variance extracted values to test for convergent validity (*Coping* = 0.42, *Perspective* = 0.35, *Alignment* = 0.67). The calculated composite reliability was > 0.60 for all three facets (*Coping* = 0.81, *Perspective* = 0.73, and *Alignment* = 0.86). As composite reliability is well above the threshold, the lower average variance extracted values can still be accepted, and convergent validity is confirmed. Discriminant validity for the CCF-Scale is given as the average variance extracted for each factor is greater than the squared correlations of each pairing of the three factors (Fornell & Larcker, 1981). The 95% confidence intervals of the correlations between *Coping*, *Perspective*, and *Alignment* do not contain one, further supporting discriminant validity. We conducted a χ^2 difference test to compare the constrained and the unconstrained model for all pairings of *Coping*, *Perspective*, and *Alignment*. The χ^2 value difference exceeds the critical value, indicating a significant difference (Anderson & Gerbing, 1988). All these tests support discriminant validity of the CCF-Scale facets (see Supporting Information: Appendix A5 for a summary of the main validity and reliability values).

6.3.2 | Nomological network and discriminant validity

We expected the CCF construct to be different from the psychological cognitive flexibility construct (measured with the Cognitive Flexibility Scale [Martin & Rubin, 1995]) but related to consumer innovativeness (measured with the Kirton Adoption-Innovation-Inventory [Kirton, 1976]). Table 3 shows that the three CCF-facets correlate significantly with consumer innovativeness and the psychological cognitive flexibility construct. These findings suggest that both cognitive flexibility scales share some similarities. To ensure that the constructs are still distinct, we calculated the heterotrait-monotrait ratio (Henseler et al., 2015), which has been used in previous research as a reliable tool to discriminate a consumer-specific scale from a general one (Luchs et al., 2021). The ratio is calculated using the correlations between the CCF-Scale and the Cognitive Flexibility Scale items. The ratio (0.74) is below the threshold of 0.85/0.90 (Henseler et al., 2015), highlighting that our CCF-Scale is a distinct construct (see Supporting Information S1 for more details on the calculation).

TABLE 3 Study 2—Correlations of the CCF-Scale and other constructs.

Variable	M	SD	1	2	3	4	5	6	7
1 Coping	2.07	0.48							
2 Perspective	3.12	0.64	0.18**						
3 Alignment	3.32	0.79	0.48**	0.54**					
4 Kirton Adoption- Innovation-Inventory	3.18	0.74	0.09*	0.60**	0.37**				
5 Cognitive Flexibility Scale	4.01	0.73	0.31**	0.60**	0.47**	0.71**			
6 Trying innovative products	2.52	1.08	−0.10**	0.11**	0.08*	0.21**	0.13**		
7 Trying in vitro meat product	2.63	1.37	−0.05	0.03	0.00	0.10*	0.05	0.79**	
8 Trying innovative dairy product	2.41	1.37	−0.11**	0.14**	0.12**	0.23**	0.15**	0.79**	0.25**

Abbreviations: CCF, Consumers' Cognitive Flexibility; M, mean, SD, standard deviation.
*$p < 0.05$; **$p < 0.01$.

Table 3 further shows significant correlations of the three CCF-facets and RNP-acceptance (*Coping* $r(694) = -0.10$, $p < 0.01$; *Perspective* ($r(694) = 0.11$; $p < 0.01$; and *Alignment* ($r(694) = 0.08$; $p < 0.05$) supporting criterion validity. A hierarchical regression analysis highlights the need for our scale in consumer research, as the CCF-Scale leads to a significant model for RNP-acceptance with an adjusted R^2 of 0.10 ($F(7, 688) = 11.83$, $p < 0.001$). Using the Cognitive Flexibility Scale instead leads to an adjusted R^2 of 0.07 ($F(5, 690) = 11.72$, $p < 0.001$), with an insignificant influence of the Cognitive Flexibility Scale on RNP-acceptance (see Supporting Information S1 for details on the analysis).

6.4 | Discussion

Study 2 replicated the findings from Study 1, thereby further addressing the overall research question and the sub-research questions 1, 2, and 3. The scale structure was confirmed; the construct of CCF was embedded into a first nomological network of related constructs, and discriminant validity was shown. We demonstrated that the CCF-facets are related to RNP-acceptance and consumer innovativeness. In addition, the CCF-Scale is more suitable and predictive in consumer research than the Cognitive Flexibility Scale from psychology.

7 | STUDY 3: VALIDITY AND RELIABILITY OF THE CCF-SCALE FOR SHOPPING GOODS

7.1 | Method

Study 3 aimed to confirm the CCF-Scale for shopping goods and to embed it into a more detailed nomological network of related constructs. We added the four pretested products (car, sofa, health app, and brand extension) to an online survey programmed in Qualtrics. We asked demographic questions before the participants saw all four products in a randomized order and indicated their intention to use them. Participants answered the CCF-Scale, the Cognitive Flexibility Inventory (Dennis & Vander Wal, 2010), the Cognitive Flexibility Scale (Martin & Rubin, 1995), the Kirton Adoption-Innovation-Inventory (Kirton, 1976), and the Analysis-Holism Scale (Choi et al., 2007).

7.2 | Participants

A market research institute recruited a sample representative for the German population based on gender, age, and education in February 2024.[4] Participants were compensated for their participation. In total, 494 answers were used for the analysis (see Supporting Information: Appendix A6 for detailed sociodemographics).

7.3 | Results

We conducted a confirmatory factor analysis for the CCF-Scale. Like Study 2, the model fit indices indicated a very good fit ($\chi^2(74) = 212.449$; $p < 0.001$; RMSEA = 0.062; CFI = 0.949, SRMR = 0.066) with all factor loadings > 0.50. To test for discriminant validity, we calculated the heterotrait-monotrait ratio again for the CCF-Scale and the two other cognitive flexibility scales, respectively. The ratio (0.75 and 0.78) is below the threshold of 0.85/.90 (Henseler et al., 2015), highlighting again that our CCF-Scale is a unique construct needed in consumer research (see Supporting Information S1 for details). We also tested for criterion validity by conducting a separate stepwise regression for each product. As shown in Table 4, adding the three CCF-facets to the baseline model improved the model significantly to an adjusted R^2 of 0.30 (car), 0.24 (sofa), 0.26 (health app), and 0.28 (brand extension), indicating a high goodness-of-fit (Cohen, 1988). The CCF-facets signficantly predict usage intention for all four products. Kirton's scale for consumer innovativeness only improved the model fit slightly.

[4]50.0% female, $M_{Age} = 47.16$, with low (17.4%), medium (35.4%), high (44.9%), and no education (2.2%).

Values are unstandardized β coefficients (standardized β coefficients in parentheses);

Furthermore, we replicated the ANOVA findings from Study 1 and 2 using different products (see Supporting Information: Appendix A7 for more details), demonstrating high predictive validity. We used correlation analysis for related constructs to embed the CCF-Scale into a more detailed nomological network (see Supporting Information: Appendix A8). Similar to Study 2, the three CCF-facets correlate significantly with consumer innovativeness ($p < 0.01$). Furthermore, *Perspective* ($r(492) = 0.35$, $p < 0.01$) and *Alignment* ($r(492) = 0.28$, $p < 0.01$) correlate positively with holistic perception, which is assumed to be beneficial in creating more inclusive categories and thus enhances cognitive flexibility (Özyörük, 2022). All CCF-facets correlate significantly ($p < 0.01$) with usage intention and product evaluation for all products, highlighting once again criterion validity. The results further strengthen the superiority of our CCF-Scale as the two scales from psychology do not correlate significantly with product evaluation or usage intention for all products (see Supporting Information: Appendix A8), making them not fully applicable to consumer research.

7.4 | Discussion

Study 3 replicated and extended the findings from Studies 1 and 2. It highlighted again the CCF-Scale's discriminant, nomological, and criterion validity. As product evaluation is an important step toward accepting RNPs (Feurer et al., 2021), the findings from Study 3 demonstrate the superiority of the CCF-Scale to existing cognitive flexibility scales from psychology.

8 | STUDY 4: CONFIRMATION OF RELIABILITY AND VALIDITY IN THE UNITED STATES (US)

8.1 | Method

The aim of Study 4 was to present a valid English version of the CCF-Scale and to confirm its reliability and validity in a different country. We used the forward-backward translation technique to transfer the survey from Study 3 into English. Two bilingual experts ensured that the meaning of each CCF-Scale item remained unchanged.

8.2 | Participants

A market research institute recruited a sample representative for the US population based on gender, age, and education.[5] Respondents received compensation for their participation. The final sample consists of 506 participants (see Supporting Information: Appendix A9 for detailed sociodemographics).

[5]50.4% female, $M_{Age} = 44.88$, with low (3.4%), medium (64.0%), high education (32.6%).

8.3 | Results

All results from Study 3 were replicated in the US (see Supporting Information: Appendix A10 for more details). The CCF-Scale shows a very good model fit ($\chi^2(74) = 217.293$; $p < 0.001$; RMSEA = 0.062; CFI = 0.937; SRMR = 0.061) with factor loadings > 0.50. Study 4 confirms the reliability and validity of the CCF-Scale in the US.

8.4 | Discussion

With Study 4, we presented a reliable and valid English version of the CCF-Scale. We further demonstrated its superiority compared to the existing scales from psychology and highlighted predictive validity for both convenience and shopping goods. With Study 4, we could affirm that the CCF-Scale is also reliable and valid in a different country.

9 | DISCUSSION AND FUTURE RESEARCH DIRECTIONS

9.1 | General discussion of findings

The results answer and affirm our general and sub-research questions, as shown in Table 5.

We were able to show that the CCF-Scale is a valid and reliable tool. Furthermore, we illustrated that CCF consists of three distinct facets (*Coping*, *Perspective*, and *Alignment*), all of which are related to RNP-acceptance. We further extended our findings to brand extensions. Jhang et al. (2012) state that brand extensions might require consumers to act similarly to RNPs if the brand expands its portfolio to domains highly incongruent with the existing products. Our research shows that the CCF-Scale is also applicable in this scenario.

Perspective deals with consumers' ability to read between the lines and evaluate new products or product information from different perspectives. This facet is positively related to RNP-acceptance, meaning that a consumer with high *Perspective* is more likely to try RNPs. These consumers might consider the product from different angles, which enhances the integration of the RNP into existing mental structures. *Alignment* focuses on consumers' ability to adjust to changes in the environment by behaving flexibly. This increases the likelihood of trying RNPs.

Coping describes consumers' ability to handle and control feelings in critical consumption situations. All conducted studies reveal a negative relationship between *Coping* and RNP-acceptance (i.e., consumers with high *Coping* are less likely to try RNPs). We can only speculate about this finding. As Dennis and Vander Wal (2010) pointed out, individuals with low cognitive flexibility are easily

TABLE 4 Predictive validity—Regression results Study 3.

	Usage intention—Baseline model				Usage intention—Model 1				Usage intention—Model 2			
	Car	Sofa	Health app	Brand ext.	Car	Sofa	Health app	Brand ext.	Car	Sofa	Health app	Brand ext.
Adjusted R^2	0.14	0.03	0.06	0.05	0.30	0.24	0.26	0.28	0.31	0.26	0.27	0.30
Variables												
Kirton Adoption-Innovation-Inventory	-	-	-	-	-	-	-	-	0.287** (0.165)	0.285** (0.172)	0.206* (0.115)	0.362** (0.203)
Coping	-	-	-	-	−0.304** (−0.234)	−0.307** (−0.248)	−0.270** (−0.201)	−0.376** (−0.281)	−0.280** (−0.215)	−0.283** (−0.229)	−0.253** (−0.188)	−0.346** (−0.259)
Perspective	-	-	-	-	0.316** (0.196)	0.390** (0.254)	0.540** (0.324)	0.450** (0.271)	0.201* (0.125)	0.277** (0.180)	0.458** (0.274)	0.305** (0.184)
Alignment	-	-	-	-	0.182* (0.132)	0.183** (0.140)	0.091 (0.064)	0.167* (0.118)	0.128 (0.093)	0.130 (0.099)	0.053 (0.037)	0.100 (0.071)
Control variables												
Gender (Female = 1)	−0.213 (−0.081)	0.102 (0.041)	0.016 (0.006)	0.021 (0.008)	−0.250* (−0.095)	0.066 (0.027)	−0.009 (−0.003)	−0.021 (−0.008)	−0.239* (−0.091)	.077 (0.031)	−0.001 (0.000)	−0.007 (−0.003)
Age	−0.029** (−0.351)	−0.013** (−0.161)	−0.021** (−0.248)	−0.020** (−0.230)	−0.019** (−0.232)	−0.002 (−0.031)	−0.011** (−0.131)	−0.007* (−0.085)	−0.018** (−0.222)	−0.002 (−0.020)	−0.011** (−0.124)	−0.006 (−0.072)
Education (High education = 1)	0.303** (0.115)	0.211 (0.084)	0.160 (0.059)	−0.084 (−0.031)	0.294** (0.112)	0.198* (0.079)	0.146 (0.053)	−0.093 (−0.034)	0.253* (0.096)	0.158 (0.063)	0.116 (0.043)	−0.144 (−0.053)

Abbreviations: Brand ext., Brand Extension; KAI, Kirton Adoption-Innovation-Inventory.

Note: Scale used to measure consumer innovativeness: KAI (Kirton, 1976); Values are unstandardized β coefficients (standardized β coefficients in parentheses).

*$p < 0.05$; **$p < 0.01$.

TABLE 5 Summary of studies.

Study	N	Aim	Research question	Findings
Study 1[a]	1057	Explore CCF-Scale structure (reliability and predictive validity)	Overall research question Sub-research question 3	CCF-Scale consists of 14 items loading onto three distinct facets: *Coping*, *Perspective*, and *Alignment*. All facets highly reliable ($\alpha > 0.70$) CCF-facets significantly predict RNP-acceptance for all products (*Alignment* and *Perspective* show positive relationship, *Coping* negative one)
Study 2[a]	696	Confirm CCF-Scale structure and strengthen results from Study 1 (reliability, discriminant, predictive, and nomological validity)	Sub-research questions 1–3	CCF-Scale distinct from Cognitive Flexibility Scale from psychology but related to the concept of consumer innovativeness. All three CCF-facets significantly predict RNP-acceptance (like Study 1)
Study 3[a]	494	Extend findings to different products	Sub-research questions 1–3	CCF-Scale distinct from Cognitive Flexibility Scale and the Cognitive Flexibility Inventory. CCF-Scale facets related to holistic perception and consumer innovativeness. *Alignment* and *Perspective* show positive relationship with RNP-acceptance, *Coping* negative (like Studies 1–2).
Study 4[a]	506	Replication of Study 3 in the US	Sub-research questions 1–4	Results replicate Study 3. CCF-Scale is reliable and valid in the US.

Abbreviations: CCF, Consumers' Cognitive Flexibility; RNP, really new products.
[a]Quota sampling; German sample except for Study 4; Prestudies not mentioned.

overwhelmed and feel paralyzed in critical situations. The same pattern could apply to CCF reflected by the *Coping* facet. Individuals might lose control in difficult consumption situations and experience negative emotions such as despair or disappointment. In contrast to positive emotions, which increase cognitive flexibility and problem-solving (Isen, 2001), negative emotions could decrease a consumer's ability to think critically about consumption problems. The mental System 2 should usually come into play for more sophisticated problem-solving. In the case of consumers with low *Coping*, the strong negative emotions these individuals experience could inhibit the switching mechanism from the automatic System 1 to the appropriate System 2 (Kahneman, 2011). Individuals who are easily overwhelmed and remain in the automatic, unconscious System 1 might agree to try RNPs without further consideration, thus temporarily resolving the problematic situation. Findings in psychological research point to a strong relationship between cognitive flexibility, assertiveness, and thoughtful decision-making because individuals are aware of their choices and options (e.g., Chesebro & Martin, 2003). These findings underline the possibility that consumers with a low level of *Coping* are less capable of considering various options in the decision-making process as they are easily overwhelmed. Furthermore, the *Coping* facet consists of reverse-coded items. Using mixed-format scales (with reverse-coded and non-reverse-coded items) is a common practice in scale development to avoid acquiescence bias (DeVellis, 2017). However, the effectiveness of reverse-coded items is discussed in the literature, and negative effects such as careless responding (Woods, 2006) or artificial two-factor solutions dividing reverse-coded and non-reverse-coded items are mentioned (Marsh, 1996). Vigil-Colet et al. (2020) state that a combination of both item types is suitable if controlled for bias effects. In Study 1, we controlled socially desirable responses. As we could replicate our findings across all studies and showed that the three-factor solution is superior to the one-factor model, we conclude that our *Coping* facet is a distinct factor.

9.2 | Future research directions

We identify several future research directions that can broadly be clustered into methods, products, and cultures.

9.2.1 | Methods

Future research could investigate the *Coping* facet more in detail to find empirical evidence for our speculations on the reverse relationship between *Coping* and RNP-acceptance. Comparing and testing related constructs (see Supporting Information: Appendix A11) could also be an exciting path for future research. In addition, as we conducted our research online, future research should consider laboratory experiments to examine the influence of CCF and its facets in a non-hypothetical setting. We request that marketing and consumer behavior researchers use and apply the CCF-Scale to

different scenarios to extend and establish its usage in the field. As the three facets, *Coping*, *Perspective*, and *Alignment*, are different expressions of CCF, we advise researchers to think about a precise research question, which helps to decide if the full CCF-Scale should be used or if one facet is sufficient. An overall score is not advisable as the negative influence of *Coping* and the positive effects of *Perspective* and *Alignment* might cancel each other out.

9.2.2 | Products

The CCF-Scale is a reliable and valid tool for different product categories. The pattern is similar: high *Coping* reduces usage intention or willingness to try products, while the opposite is true for *Perspective* and *Alignment*. Extending these findings to other product categories would be an exciting path.

9.2.3 | Cultures

As we present a reliable and valid scale in German (items in Supporting Information: Appendix A12) and English, we hope to see cross-cultural studies extending the findings to other cultures in the future.

9.3 | Managerial implications

We show that CCF consists of three distinct facets emphasizing three layers of consumer behavior: feelings, thoughts, and actions. Managers should use the CCF-Scale during the development phase of RNPs and combine it with cocreation methods. Laboratory experiments with virtual environments (e.g., virtual supermarkets) might be a suitable tool to analyze how consumers with high *Alignment* navigate in new surroundings and how the environment should be adjusted to enhance the performance of consumers with low *Alignment*. This might also be relevant for digital interfaces (e.g., testing user experience before the product launch). Using focus groups or individual interviews could be a suitable method for consumers with low *Perspective*, as talking about the description of a RNP might detect how packaging information needs to be adjusted to enhance future usage intention. The CCF-facet *Coping* can also be considered during the product development phase by simulating different consumption situations (e.g., using role plays). This process could help to understand the role of feelings when confronted with RNPs and how managers can influence these situations (e.g., training sales personnel accordingly).

For the marketing of established RNPs, our study findings can be used along the marketing mix. The facet *Alignment* highlights that consumers with high cognitive flexibility can easily find their way around a store that is unfamiliar to them. To also attract consumers with low *Alignment*, we advise store managers to present RNPs dominantly (e.g., signs pointing toward the RNP) or to add store designs with the RNPs' location in the stores' apps. The facet *Perspective* can be targeted by providing holistic information on the RNP. We suggest that marketing campaigns should be clear and concise when targeting consumers with low *Perspective*. Analogies have been shown to be beneficial for RNP-acceptance (Moreau et al., 2001) and could be an effective marketing technique to enhance RNP-acceptance for consumers with low *Perspective*. Furthermore, we show that consumers with high *Coping* are less willing to try RNPs. Marketers should move beyond simple marketing techniques to excite consumers who tend to control their feelings well (e.g., using guerilla marketing).

10 | LIMITATIONS

Some limitations are worth mentioning. As we conducted the study online, the respondents only hypothetically indicated their willingness to try and use the RNPs, which might not reflect their actual behavior. In addition, our study focuses mainly on RNPs as we used these products as use cases for testing and validating the CCF-Scale. Even though we also showed the scale's applicability to brand extensions, all products share some level of incongruence or newness. If and to what extent the CCF-Scale performs similarly in other scenarios (e.g., congruent brand extensions or services) remains unclear. We are aware of all these limitations and see those as opportunities for future marketing and consumer research applications.

11 | CONCLUSION

Our research contributes to the existing consumer behavior literature by providing a new angle to discuss consumers' RNP-acceptance and by presenting a scale measuring CCF. As our findings are based on different representative samples from two countries, we provide compelling evidence for the reliability and validity of the CCF-Scale. Our study shows that three distinct facets (*Coping*, *Perspective*, and *Alignment*) reflect the CCF construct, which impacts consumers' RNP-acceptance of various products.

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CONFLICT OF INTEREST STATEMENT

The author declare no conflict of interest.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

ETHICS STATEMENT

We certify that we have complied with COPE and ethical standards regarding research with human participants in the conduct of the research presented in this manuscript. The studies were approved by the ethics committee of the Technical University of Munich (approval number: 293/21 S).

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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