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# Forty years of context effect research in marketing: a bibliometric analysis

Susanne Jana Adler<sup>1</sup> · Martina Katharina Schöniger<sup>2</sup> · Marcel Lichters<sup>2</sup> · Marko Sarstedt<sup>1,3</sup>

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## Abstract

Research on context effects shows that the composition of choice sets and choice framing strongly influences consumer decision-making. Researchers have identified various context effect types and provide insight into their antecedents, consequences, and mechanisms of action. However, the research on context effects is spread across several fields, making it difficult to grasp the entire scope. Reviews focusing on specific effect types can facilitate rigorous research and publication practices, but they focus primarily on prominent context effects, neglecting others. Furthermore, those reviews do not provide insight into the structure of scholarly networks that result from research collaborations and shape, generate, distribute, and preserve the intellectual knowledge of the context effect domain. Addressing these issues, we present a large-scale bibliometric analysis of the field, that helps navigate the context effect landscape, highlights its themes, and identifies knowledge gaps. An interactive web application also allows for our analyses to be customized and extended.

**Keywords** Bibliometric analysis · Context effect · Attraction effect · Compromise effect · Asymmetric dominance effect · Phantom decoy effect

## 1 Introduction

Consumer and marketing researchers have long demonstrated that the choice context significantly affects purchase decisions (e.g., Bettman et al., 1998; Bettman & Zins, 1977). While contextual influence is a broad term (e.g., Thomadsen et al. 2018), an important research area deals with context effects, showing that the choice set composition and the framing of choice problems strongly influence consumers' decision-making when choosing products (Tversky and Simonson 1993). Since the introduction of context effects to consumer research over 40 years ago (Huber et

al. 1982), marketers and policymakers have systematically applied them in various domains, for example, to foster socially desired behavior by nudging consumers to make healthier food choices (e.g., Missbach and König 2016; Sharpe et al. 2008), to opt for environmentally and animal-friendly products or services (e.g., Clark et al. 2003; Jonge et al. 2015), or to engage more in charitable giving (e.g., Pittarello et al. 2020). The relevance of research on these effects extends to other fields beyond consumer marketing, such as politics (e.g., in the context of general elections, Hedgcock et al. 2009; Pan et al. 1995), legal decision-making (e.g., Kelman et al. 1996), neuroscience (e.g., the neural correlates of such phenomena, Hedgcock and Rao 2009), and medicine (e.g., physicians' decisions about medications, Schwartz and Chapman 1999). Over the past decades, researchers have identified a variety of different context effect types. The most prominent examples include the attraction and compromise effects (Huber et al. 1982; Simonson 1989). Moreover, researchers have identified a growing number of other context effects, such as the phantom decoy effect (Farquhar and Pratkanis 1993), the background contrast effect (Simonson and Tversky 1992), and, more recently, the abrupt disparity effect (Dogerlioglu-Demir et al. 2022) as well as the upscaling effect (Evangelidis et al. 2022).

In light of the field's increasing maturity, several authors have presented reviews and meta-analyses of context effect research (e.g., Dowling et al. 2020; Heath and Chatterjee 1995; Lichters et al. 2015; Milberg et al. 2014; Neumann et al. 2016; Thomadsen et al. 2018) and provided important insights into their antecedents, consequences, and mechanisms of action. Moreover, a prominent research debate on the attraction effect's robustness has already engaged the scientific community (e.g., Frederick et al. 2014; Huber et al. 2014; Lichters et al. 2015; Simonson 2014; Yang and Lynn 2014), which further demonstrates the interest in and the managerial importance of context effects. However, those literature reviews and debates do not offer much clarity on the structure of scholarly networks that researchers have formed through their co-authored works, nor do they reveal an overarching structure of research topics. Understanding the structures of these networks is important, as they set the rules for the network's power game in which authors, editors, and topics joust for authority and influence. These network structures therefore influence the content, output, and performance of those involved in its boundaries (Fortunato et al. 2018). In addition, existing literature reviews focus primarily on the attraction and compromise effects but neglect other context effect types that are necessary to grasp the full scope of corresponding behavioral interventions.

To address these issues, we present the results of a large-scale bibliometric analysis of context effect research. Since bibliometric analyses describe overarching structures in a research field, they help identify knowledge gaps, spark innovative research ideas, and assist with a manuscript's positioning in a research field (Donthu et al. 2021). Bibliometric reviews have gained relevance in various areas of consumer research, including brand management (e.g., Rojas-Lamoren et al. 2022), sensory marketing (e.g., Wörfel et al. 2022), and consumer psychology (e.g., Adler and Sarstedt 2021).

We set the stage for our bibliometric analysis by providing a concise overview of context effects relevant to product choice (see overview of context effects at the open science framework (OSF): <https://osf.io/ghv4e>). Next, we unveil the field's struc-

ture by identifying prominent scholars, research themes, and articles that bridge the different streams in context effect research. By utilizing our analyses, we propose future research avenues and pave the way for the future extension of our analyses. We achieve this by providing all data and analysis scripts on the OSF, as well as an interactive R Shiny web application that includes additional materials and allows for custom analyses ([https://mktg.shinyapps.io/CEbiblio\\_ShinyApp/](https://mktg.shinyapps.io/CEbiblio_ShinyApp/)).

## 2 Theoretical background

In marketing and consumer research, the term context effects summarizes phenomena describing changes in consumer preferences that result from subtle changes in the choice situation. These changes can come from variations in the choice set composition, which entail “preference changes that depend on the availability of other options” (Trueblood et al. 2013, p. 901). Furthermore, context effects can emerge from variations in choice framing such that “seemingly inconsequential changes in the formulation of choice problems [*cause*] significant shifts of preference” (Tversky and Kahneman 1981, p. 457).

Over the past 40 years, researchers have identified a multitude of different context effects resulting in seemingly irrational decision outcomes in product choice. These context effects can broadly be classified into four groups, depending on the nature of their influence on consumers’ preference formation.

### 2.1 Deciding for or against a single product

Context effects in the first group are relevant in instances where the consumer is faced with the decision to buy a single product or not. Specifically, the display set effect (Karmarkar 2017), the single option aversion (Mochon 2013), and the lone alternative effect (Glazer et al. 1991; Kahn et al. 1987) highlight that consumers avoid products that are offered in isolation. The *display set effect* (Karmarkar 2017) describes a situation where the mere (viewable) presence of additional, ineligible products in the display set increases the consumer’s purchase intention for a single available product from the same category as the display set. Presenting a matched display set satisfies consumers’ needs to search for alternative options and resolves otherwise salient considerations of opportunity cost (Karmarkar 2017). Following this notion, consumers are more likely to buy a product when, during decision-making, other products from the same category are displayed as well.

According to the *single option aversion* (Mochon 2013), consumers are less likely to choose a product if it is presented in isolation versus jointly with competing products. This is because presenting a single option triggers consumers’ need to search for alternative products. However, in contrast to the display set effect, consumers in the single option aversion paradigms can opt for the other alternatives presented too. In the same vein, the *lone alternative effect* (Glazer et al. 1991; Kahn et al. 1987) arises when consumers face an externally imposed constraint in a choice, for example, when choosing between stores with different assortments before deciding on a product. Since consumers prefer larger over smaller assortments, they are more

likely to choose a specific product in a store with a large assortment than in a small assortment store (Glazer et al. 1991; Kahn et al. 1987).

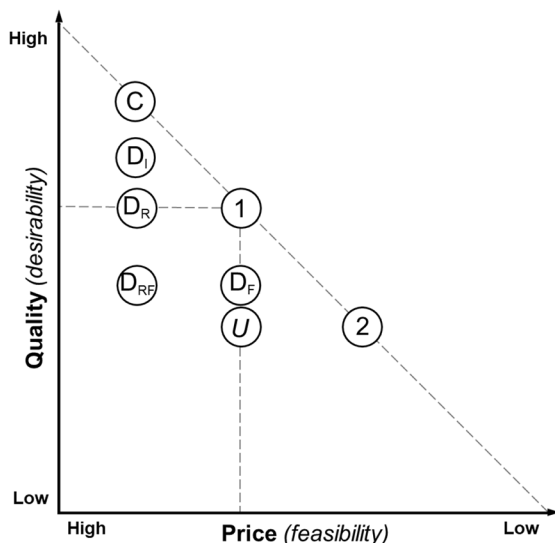
## 2.2 Making decisions when a decoy option is added to a choice set

The second group of context effects arises when consumers decide between non-dominating alternatives, where a particular option is the target (the option marketers are interested in selling), whereas another option is the competitor. Adding a decoy product to this choice set can shift consumer preferences toward one of these options. Context effects in this group include the attraction effect (Huber et al. 1982), the repulsion effect (Frederick and Lee 2008; Simonson 2014), the compromise effect (Simonson and Tversky 1992), the polarization effect (Simonson and Tversky 1992), the phantom decoy effect (Farquhar and Pratkanis 1993), as well as the more recently proposed abrupt disparity effect (Dogerlioglu-Demir et al. 2022) and the upscaling effect (Evangelidis et al. 2022). To illustrate this group of context effects, suppose a consumer has to choose between two products. The alternatives are described in terms of two attributes—quality and price—where Product 1 (the target of manipulation) is better on the quality dimension, but Product 2 (the competitor) is better on the price dimension. Figure 1 portrays such a situation, which we will use to introduce the attraction effect (Huber et al. 1982), the compromise effect (Simonson 1989), the upscaling effect (Evangelidis et al. 2022), and the phantom decoy effect (Farquhar and Pratkanis 1993).

The *attraction effect* emerges when adding a new product alternative (a decoy Product D) to the choice set. Product D is inferior to Product 1 in terms of one or both attribute(s) quality and price. Importantly, Product 2 does not dominate this added decoy alternative (asymmetric dominance). Researchers therefore also use the term asymmetric dominance effect (Ariely and Wallsten 1995; Müller et al. 2014). While

**Fig. 1** Illustration of the attraction effect, the compromise effect, the phantom decoy effect, and the upscaling effect

*Note.* The figure illustrates the position of the products in a two-dimensional attribute space (i.e., quality and price) for the attraction effect and the compromise effect. For the upscaling effect, the dimensional attribute space focuses on feasibility (i.e., price) and desirability (i.e., quality); C=extreme decoy, D<sub>I</sub>=inferior decoy, D<sub>F</sub>=frequency decoy, D<sub>R</sub>=range decoy, D<sub>RF</sub>=range-frequency decoy, U=symmetrically dominated decoy, 1=target product, 2=competitor product.



consumers should not choose the inferior Product D, adding this decoy increases the choice probability for Product 1 (the target option) over Product 2 (the competitor option, Huber et al. 1982). Huber et al. (1982) and Huber and Puto (1983) introduced multiple decoy types that describe the exact nature of the dominating relationship. Specifically, the authors distinguish the relative inferior decoy ( $D_I$ ), the range decoy ( $D_R$ ), the frequency decoy ( $D_F$ ), and the range-frequency decoy ( $D_{RF}$ ). A related context effect is the *repulsion effect* (Frederick and Lee 2008; Simonson 2014) in which the decoy increases the choice probability for the competitor over the target alternative. The repulsion effect—which is also referred to as a negative attraction effect (Aaker 1991)—is therefore contrary to the attraction effect. While the repulsion effect is well established in perceptual choice tasks and risky choice involving lotteries (Brendl et al. 2023; Evans et al. 2021; Spektor et al. 2018, 2022), significant evidence for repulsion in preferential product choice tasks is scarce (e.g., Banerjee et al. 2022; Liao et al. 2021).

Recently, prominent context effect researchers emphasized that asymmetric dominance is not necessary for the relationship between the target alternative and the decoy product. Specifically, to evoke the so-called *upscaling effect*, Evangelidis et al. (2022) added a symmetrically dominated decoy (see option *U* in Fig. 1) to the choice set and observed increased choice shares of the highly desirable Product 1 as a result. The authors argue that consumers favor desirability (e.g., high quality) over feasibility (e.g., low price), and try to accumulate evidence to justify the selection of Product 1 over Product 2.

The *compromise effect* emerges when a new product option (Product C) is added to the binary choice set, with Product C having extreme attribute values (e.g., very high quality and very high price). As a result, Product 1 is now in a compromise position between the two more extreme options (Product 2 and Product C). As consumers generally seek to avoid choosing options with extreme attribute levels (Simonson and Tversky 1992), the choice probability of Product 1 increases (Simonson 1989). Extremeness aversion also elicits the *polarization effect* (Simonson and Tversky 1992) in which the choice probability of an extreme (e.g., high quality) alternative increases if the advantage induced by a particular attribute (e.g., high quality) is larger than the disadvantage of the other attribute (e.g., high price).

The *phantom decoy effect* (Farquhar and Pratkanis 1993) emerges when adding an option to the choice set “that looks real but for some reason is unavailable at the time a decision is made” (Farquhar and Pratkanis 1993, p. 1214). Such phantom decoys can be framed in terms of, for example, out-of-stock or preannounced products. Depending on the decoy’s position, the choice framing (a free choice including the option not to buy any product vs. forced choice), and knowledge of the phantom (a priori known unavailability vs. unavailability that is only unveiled if one tries to select the phantom), adding a phantom decoy can increase the target option’s as well as the competitor’s choice shares (e.g., Ge et al. 2009; Hedgcock et al. 2016; Simonson 1989).

A further context effect, the *abrupt disparity effect* (Dogerlioglu-Demir et al. 2022), assumes consumers to be faced with decisions involving larger assortments than those in Fig. 1. According to the abrupt disparity effect, manipulating product presentation order may increase the choice shares for a premium target alternative

(i.e., the option with the highest quality and the highest price). Specifically, consumers are more likely to choose a premium product in a choice set that is arranged in ascending order from low-quality / low-price products to high-quality / high-price products if an extremely inferior low-quality / low-price decoy product is placed next to the premium product, which disrupts the ascending order.

### 2.3 Making decisions when attributes or attribute levels change

The third group of context effects also engages binary choice sets. However, unlike decoy manipulations, no additional product is added to the choice set, but information on the two core set alternatives is systematically changed to shift consumer preferences in favor of the target option. This includes the additional information on shared attribute values among the two core products (common attribute effect, Evangelidis and van Osselaer 2018; and common feature effect, Chernev 1997), setting an attribute value to zero for the target option (zero-comparison effect, Palmeira 2011), or using attribute values in product descriptions that are rather extreme or intermediate within alternatives (the influence of impoverished options compared to the influence of enriched options, Shafir 1993).

The *zero-comparison effect* (Palmeira 2011) occurs when an attribute of a particular product is set to zero (vs. the attribute having a greater value). This attribute level entails a considerable change in reference point perception (see also Shampianier et al. 2007). As a consequence, although consumers usually appreciate higher values on that attribute (e.g., the number of pods included with a coffeemaker), setting its value to zero increases the choice probability for the corresponding option over its competitor.

Information on common product attributes also influences consumer choices between two products. The *common attribute effect* (Evangelidis and van Osselaer 2018) emerges when information on the shared common characteristics of the two products in a choice set is provided (vs. not provided). Specifically, the choice likelihood of a product alternative with a low quality and a low price increases when common characteristics with the higher quality but more expensive alternative are made salient (vs. not made salient). This shared characteristic improves the low-quality option's assessment since it performs better than expected on the common attribute. Albeit related, the *common feature effect* (Chernev 1997) is conceptually different from the common attribute effect, in that the common feature effect only applies to choices involving non-priced (or equally priced) alternatives and focuses on the role of attribute importance. Specifically, if attribute importance is unbalanced, adding a common feature increases the choice likelihood for the alternative with higher values on the most important attribute. Under conditions of equal attribute importance, in contrast, adding a common feature, for example, increases the choice likelihood for the option with the best attribute values on the attribute with the highest variance among the two core alternatives. This is because consumers are assumed to overweight differences between the choice alternatives due to the increased choice difficulty.

Similarly, *enriched* vs. *impoverished options* (Shafir 1993) in a binary choice set also alter individual preferences. Consumers choose an enriched product alternative

(i.e., an option with many extremely positive and negative attribute levels) relatively more often than they would choose an impoverished alternative (i.e., an option with less pronounced positive / negative attribute levels). This effect arises, because consumers making their choices weight positive attributes more strongly. Likewise, if consumers are asked to reject one of the options, they reject the enriched option relatively more often than the impoverished option. This is because consumers rejecting an option weight negative attributes more strongly. This effect of preference for enriched over impoverished choice alternatives also unfolds in choice problems with more than two alternatives (Colombo et al. 2002).

## 2.4 Influencing decisions by past choice sets

Finally, the last group of context effects proposes that product preferences formed in the recent past (i.e., former choice instances) influence subsequent decisions which apply to the background contrast effect (Simonson and Tversky 1992) and the jilting effect (Garvey et al. 2017). According to the *background contrast effect* (Simonson and Tversky 1992), the trade-off from an initial choice set (e.g., price-quality trade-off) affects consumer choice behavior in a subsequent choice set. For example, an initial choice may introduce a default for a price-quality trade-off. In the subsequent choice, consumers will favor the option that exceeds this trade-off criterion (e.g., price per quality unit), while neglecting actual absolute attribute levels (actual price and actual quality).

Relatedly, according to the *jilting effect* (Garvey et al. 2017), preannounced (i.e., not yet available) product alternatives impact consumer choice, even if these alternatives are subsequently never introduced to the choice set. Specifically, when anticipating a desirable option, consumers devalue incumbent options and retain this negative evaluation, even if the desirable option vanishes. This subsequently decreases the incumbent option's choice share (Garvey et al. 2017).

In summary, this short overview of context effects in product choice highlights how the field covers a wide range of phenomena, from the most primal effects (e.g., the attraction effect, Huber et al. 1982) to more complex choice phenomena (e.g., the jilting effect; Garvey et al. 2017).

## 3 Methodology

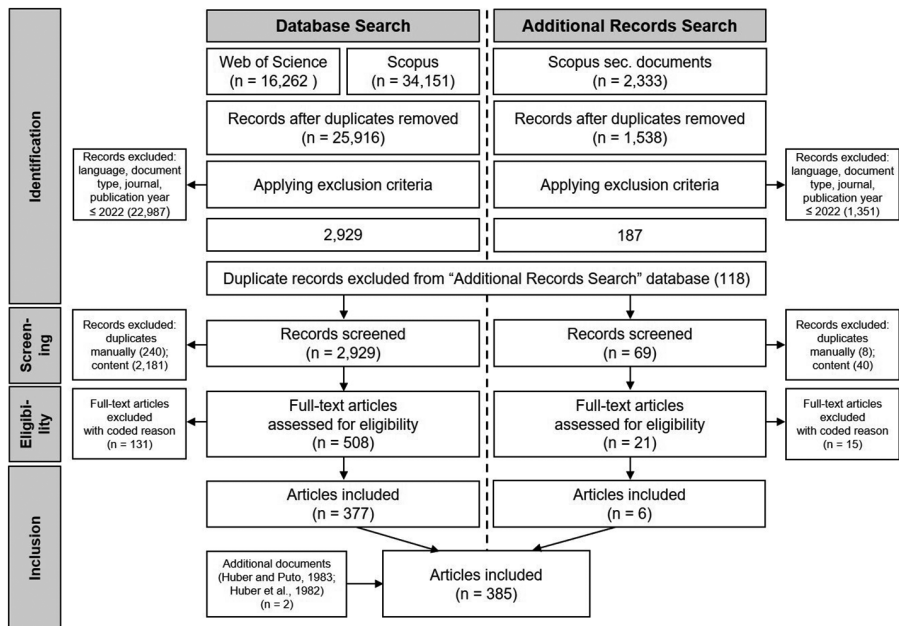
To set the stage for our bibliometric analysis, we conducted extensive desk research to identify not only relevant context effects, but also the most recent developments in context effect research.<sup>1</sup> Our bibliometric analysis follows Donthu et al.'s (2021) guidelines and combines the latter with the PRISMA (Preferred Reporting Items for

<sup>1</sup> Specifically, we took into account reviews and debates on context effects (Dhar & Gorlin, 2013; Frederick et al., 2014; Lichters et al., 2015; Lichters et al., 2017; Shafir et al., 1993; Simonson, 2014; Simonson (2015); Simonson & Tversky, 1992; Won, 2007) and more recently proposed effects (Dogerlioglu-Demir et al., 2022; Evangelidis et al., 2022; Evangelidis & van Osselaer, 2018; Garvey et al., 2017; Karmarkar, 2017). We further would like to thank an anonymous reviewer who suggested including the common feature effect (Chernev, 1997).



Systematic Reviews and Meta-Analysis) statement approach (Page et al. 2021) to foster transparency (Fig. 2). We collected data from the Web of Science and Scopus databases by searching for specific context effect-related keywords within articles' titles, abstracts, and keywords.<sup>2</sup> In addition to the identified records, we included Scopus's secondary documents and manually added two seminal publications (Huber et al. 1982; Tversky and Simonson 1993) that were not listed.

Subsequent steps excluded duplicates and articles that did not meet predefined inclusion criteria relating to language (English), document type (journal article), and journal (i.e., SCImago subject areas: "Business, Management and Accounting," "Decision Sciences," "Economics, Econometrics and Finance," "Multidisciplinary," or "Psychology"; SCImago, n.d.). The total sample includes 2,929 articles from the Web of Science and Scopus, as well as 69 articles from Scopus's secondary documents. We applied an additional manual content review to ensure that our dataset



**Fig. 2** PRISMA flow chart

*Note.* The figure illustrates the data screening process following the proposed stages of identification, screening, eligibility, and inclusion by Page et al. (2021), resulting in  $n=385$  articles for our bibliometric analysis. Flow chart adapted from Page et al. (2021).

<sup>2</sup> Specifically, we used the following search terms: "attraction effect\*"; "asymmetric\* domina\* effect\*"; "asymmetric\* domina\* choice\*"; "asymmetric\* domina\* option\*"; "range decoy\*"; "frequency decoy\*"; "range frequency decoy\*"; "inferior decoy\*"; "decoy choic\*"; "decoy option\*"; "compromise choice\*"; "compromise option\*"; "display set effect\*"; "display set option\*"; "background-contrast effect\*"; "zero comparison effect\*"; "single option aversion\*"; "repulsion effect\*"; "polariz\* effect\*"; "lone alternative\*"; "jilt\* effect\*"; "impoverish\* option\*"; "enrich\* option\*"; "phantom alternative\*"; "phantom decoy\*"; "phantom effect\*"; "decoy effect\*"; "compromise effect\*"; "extremeness avers\*"; "common attribute\*"; "context effect\*"; "common feature\*" AND preference\*; "abrupt disparit\* effect\*"; "upscaling\* effect\*".

only contained articles dealing with context effects (e.g., testing individual effects, describing underlying choice models, or reviewing prior research). This step resulted in 385 articles as the basis for the bibliometric analysis.<sup>3</sup>

## 4 Results

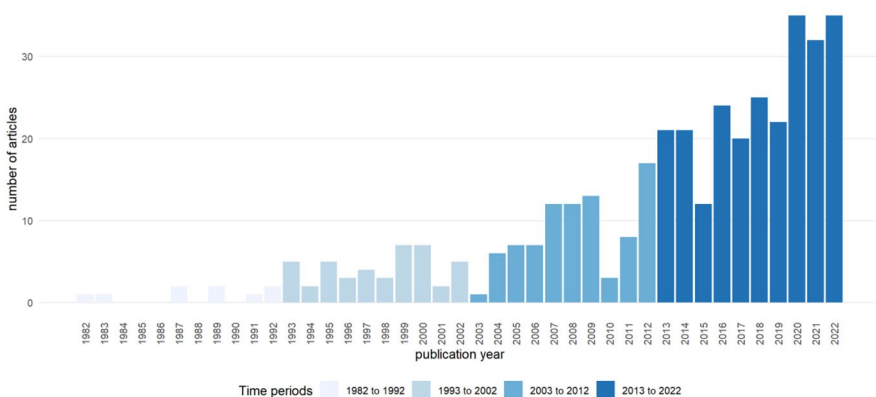
### 4.1 Descriptive statistics and publication years

The 385 articles were published between 1982 and 2022 (see Fig. 3). They cover 130 journals and 704 authors from 38 countries and 360 universities. We found an increase in context effect research after 2010, with peaks in 2020 and 2022 (both  $n=35$ ). Specifically, 9 articles were published from 1982 to 1992, 43 from 1993 to 2002, 86 from 2003 to 2012, and 247 from 2013 to 2022.

### 4.2 Article analysis

In total, 13 articles received more than 200 citations (left column in Table 1), while another 20 articles received at least 100 citations. With more than 900 citations each, the three most-cited papers are Huber et al.'s (1982) seminal publication on the attraction effect, Simonson's (1989) foundational work on the attraction and the compromise effect, and Simonson and Tversky's (1992) pioneering paper on the compromise effect, the background contrast effect, and the polarization effect.

Regarding the number of annual citations, we found 24 articles with more than 10 citations per year (right column in Table 1). While the total citation analysis favors



**Fig. 3** Number of context effect articles per year

*Note.* The figure presents the context effect research trend between 1982 and 2022.

<sup>3</sup> For our analysis, we used the R packages *bibliometrix* (Aria & Cuccurullo, 2017), *igraph* (Csardi & Nepusz, 2006), *sna* (Butts, 2022), *quanteda* (Benoit et al., 2018), and *topicmodels* (Grün & Hornik, 2011). For results visualization, we used the packages *ggplot2* (Wickham, 2016) and *visnetwork* (Almende et al., 2019). For the app, we further used *shiny* (W. Chang et al., 2022) and *quarto* (Allaire, 2022).

**Table 1** Top 15 articles per total number of citations and number of citations per year

Article (Total number of citations)	Article (Number of citations per year)
Huber et al. 1982 (1084)	Simonson 1989 (30.54)
Simonson 1989 (1069)	Simonson and Tversky 1992 (29.09)
Simonson and Tversky 1992 (931)	Bordalo et al. 2013 (28.55)
Tversky and Simonson 1993 (696)	Huber et al. 1982 (25.81)
Roe et al. 2001 (545)	Roe et al. 2001 (23.70)
Dhar and Simonson 2003 (381)	Tversky and Simonson 1993 (22.45)
Shafir 1993 (379)	Novemsky et al. 2007 (20.94)
Novemsky et al. 2007 (356)	Busemeyer et al. 2019 (18.40)
Simonson and Nowlis 2000 (344)	Dhar and Simonson 2003 (18.14)
Bordalo et al. 2013 (314)	Trueblood et al. 2014 (15.80)
Usher and McClelland 2004 (284)	Simonson and Nowlis 2000 (14.33)
Briley et al. 2000 (276)	Usher and McClelland 2004 (14.20)
Huber and Puto 1983 (255)	Trueblood et al. 2013 (13.91)
Pocheptsova et al. 2009 (196)	Geyskens et al. 2010 (13.79)
Geyskens et al. 2010 (193)	Pocheptsova et al. 2009 (13.07)

*Note.* This table lists the top 15 context effect articles per total number of citations and number of citations per year.

early articles, which have a greater chance of being cited, the citations per year indicate more recent yet influential articles, such as the work by Bordalo et al. (2013) on attribute saliency's effect on consumer choice and Trueblood et al.'s (2013) generalization of the context effect logic with regard to perceptual decision-making tasks.

### 4.3 Author analysis

Among the field's contributors, we identify *Itamar Simonson*, *Amos Tversky*, *Joel Huber*, *Christopher Puto*, *Ravi Dhar*, and *John W. Payne* as the most impactful scholars, with more than 1,000 total citations each in our dataset (Table 2). Given their early conceptual work in the field, especially in describing the most prominent context effects, these authors can be considered the field's founding fathers.

An author collaboration analysis (Fig. 4) finds a considerable connectedness between context effect researchers but also reveals a relatively sparse network of 704 authors with 977 collaboration ties, indicating that only 0.39% of all possible network ties were formed. We identify five large but unconnected research groups with 20 authors or more that form their own fields of expertise.

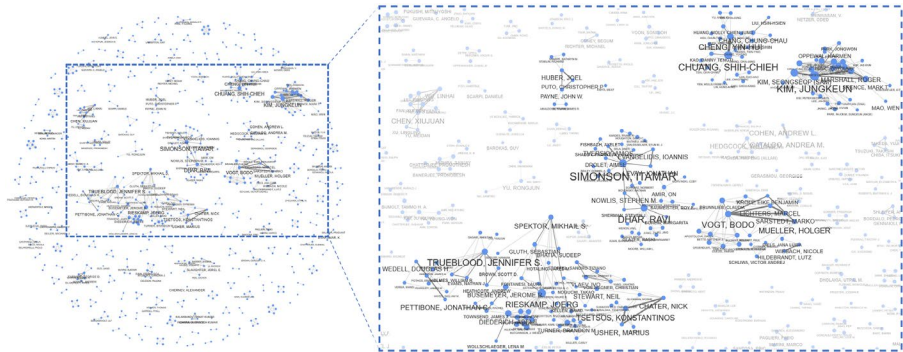
First, the largest component with 67 authors includes several prominent authors in the field of choice modeling, such as *Jörg Rieskamp*, *Adele Diederich*, *Jennifer S. Trueblood*, *Jerome R. Busemeyer*, *Brandon Turner*, and *Konstantinos Tsetos*. A more detailed assessment of this component highlights some heterogeneity between the authors' main research foci—for example, the specific choice models—they propose, examine, and debate. For example, we find links to the decision field theory (Roe et al. 2001), the multiattribute linear ballistic accumulator model (Trueblood

**Table 2** Top 15 authors per total number of articles, total number of citations, and average number of citations per article

Author's total number of articles	Author's total number of citations	Author's average number of citations per article
Simonson, Itamar (16)	Simonson, Itamar (4,277)	Roe, Robert M. (545)
Kim, Jungkeun (11)	Tversky, Amos (1,690)	Puto, Christopher (472)
Chuang, Shih-Chieh (10)	Huber, Joel (1,499)	Tversky, Amos (422.5)
Dhar, Ravi (10)	Puto, Christopher (1,416)	Payne, John W. (390)
Trueblood, Jennifer S. (9)	Dhar, Ravi (1,337)	Shafir, Eldar (379)
Vogt, Bodo (8)	Payne, John W. (1,170)	Huber, Joel (374.75)
Cheng, Yin-Hui (7)	Bussemeyer, Jerome R. (803)	Novemsky, Nahan (356)
Rieskamp, Jörg (7)	Nowlis, Stephen M. (608)	Schwarz, Norbert (356)
Mueller, Holger (6)	Townsend, James T. (558)	McClelland, Jams (284)
Tsetsos, Konstantinos (6)	Usher, Marius (547)	Townsend, James T. (279)
Catalado, Andrea M. (5)	Roe, Robert M. (545)	Briley, Donnel A. (276)
Chater, Nick (5)	Trueblood, Jennifer S. (428)	Morris, Michael W. (276)
Chen, Xiujuan (5)	Pettibone, Jonathan C. (385)	Simonson, Itamar (267.31)
Cohen, Andrew L. (5)	Baumeister, Roy F. (384)	Bussemeyer, Jerome R. (200.75)
Pettibone, Jonathan C. (5)	Shafir, Eldar (379)	Pocheptsova, Anastasiya (196)
Spektor, Mikhail S. (5)		
Usher, Marius (5)		

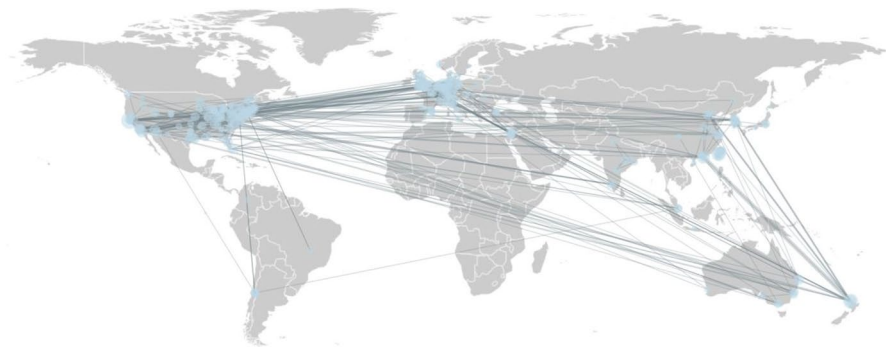
*Note.* This table lists the top 15 authors on context effects per total number of articles, total number of citations, and average number of citations per article. If ties emerge, we display more than 15 authors.

et al. 2014), and the accentuation-of-differences model (Spektor et al. 2019). Since authors also engage in rigorous discussions on the origins of context effects (e.g., Bussemeyer et al. 2019; Tsetsos et al. 2015), this large component indicates a valuable exchange of ideas between authors—which ultimately advances the field in its quest to shed light on context effects' background processes. The second component (n=35) includes seminal researchers in consumer research on context effects, such as *Itamar Simonson*, *Ravi Dhar*, *On Amir*, and *Amos Tversky*. Moreover, this component includes researchers who examine psychological moderators to context effects, such as *Stephen M. Nowlis* and *Roy Baumeister*. Two further components (n=27) comprise researchers like *Jungkeun Kim*, *Seongseop Kim*, *Roger Marshall*, and *Mark T. Spence*, and, respectively, *Shih-Chieh Chuang*, *Yin-Hui Cheng*, and *Chung-Chau Chang*, who conduct context effect-related research into consumer behavior and marketing and examine the influences of different choice situations, for example, choosing for others (C.-C. Chang et al. 2012) or choosing under time pressure (Cui et al. 2021). Another large component (n=20) includes researchers like *Bodo Vogt*,



**Fig. 4** Author collaboration network

*Note.* The figure shows the co-authorship network of context effect researchers. Nodes represent authors and edges represent co-authorships. Some nodes were rearranged to improve readability. This does not affect the network's properties. The font size and node size correspond to the number of articles per author.



**Fig. 5** Affiliation-specific collaborations worldwide

*Note.* This figure shows the affiliation-specific collaborations of context effect researchers on a world map.

*Holger Müller, Marcel Lichters, and Marko Sarstedt*, who focus on methodological and physiological moderators (e.g., serotonin brain levels; Lichters et al. 2016a; Lichters et al. 2016b) to context effects. In addition, the pioneering authors (*Joel Huber, Christopher Puto, and John W. Payne*) in attraction effect research comprise their own smaller component ( $n=7$ ).

A country-specific author analysis highlights that the U.S.A. is the epicenter of context effects research. Authors from U.S. universities (co)authored 198 (51.4%) articles, followed by their German (45 articles, 11.7%), UK (40 articles, 10.4%), and Chinese colleagues (40 articles, 10.4%). We further analyze affiliation networks (Fig. 5) for the number of publications and identify the top 3 most productive affiliations as Stanford University, U.S.A. (19 articles), the University of Warwick, UK (14 articles), and the Otto-von-Guericke-University Magdeburg, Germany (11 articles).

#### 4.4 Journal analysis

Context effect research features prominently in top-tier marketing research outlets. With 30 articles and 4,601 citations (153.37 citations per article), the *Journal of Consumer Research* is the most prominent publication outlet, followed by the *Journal of Marketing Research* with 27 and 3,262 citations (120.81 citations per article; Table 3). The journal analysis further emphasizes the diverse nature of the context effect research field that spans consumer and marketing research (e.g., *Marketing Letters*, *Journal of Consumer Psychology*, and *Journal of Business Research*), as well as more general research in psychology (e.g., *Psychological Review* and *Memory and Cognition*), and also in management and economics (e.g., *Management Science*, *Journal of Political Economy*, and *American Economic Review*).

#### 4.5 Analysis at the level of context effects

We manually coded each article to identify the type of context effect being investigated. Based on the type of context effect, we examined the prevalence and interconnectedness of context effect research (Table 4) and the number of articles investigating multiple context effects. This allowed us to derive a context effect co-occurrence network (Fig. 6). The co-occurrence network shows the effects as nodes, with node sizes indicating the number of articles covering each effect. Edges between nodes represent the number of common articles. The co-occurrence network reveals a single component dominating the network. This component includes the attraction and the compromise effect in central network positions. The network further includes several isolated effects, such as the zero-comparison effect and the common attribute effect, or the more recently proposed upscaling effect.

The number of articles is highest for the attraction effect ( $n=256$ ) and the compromise effect ( $n=180$ ). Although less prominent, research also frequently relates to phantom decoys ( $n=27$ ), the repulsion effect ( $n=10$ ), the background contrast effect ( $n=10$ ), and enriched vs. impoverished options ( $n=10$ ). Furthermore, we consider each effect's network centrality, indicating its importance for maintaining network structure. Specifically, degree centrality is the number of edges shared with other nodes, representing its absolute connectedness within the network (Newman 2010). Betweenness centrality corresponds to the number of shortest paths between two other nodes that go through the target node (Newman 2010). This measure denotes a node's power as an intermediary that connects research on different context effects. Both network centrality measures identify the attraction effect and the compromise effect as central to the network.

#### 4.6 Keyword and topic analysis

The final step of analysis evaluates each article's keywords. To obtain a meaningful list of keywords, we first merged the keywords assigned by the authors with those automatically assigned by the databases. Second, we determined synonymous keywords (e.g., eye tracking, eye fixation analysis) and aggregated them into one term

**Table 3** Top 15 journals per total number of articles, total number of citations, average number of citation per article, and impact factors

Journal's total number of articles and impact factor	Journal's total number of citations and impact factor	Journal's average number of citations per article and impact factor
Journal of Consumer Research (30, 8.612)	Journal of Consumer Research (4,601, 8.612)	Memory and Cognition (213, 2.482)
Journal of Marketing Research (27, 6.664)	Journal of Marketing Research (3,262, 6.664)	Journal of Political Economy (169.5, 9.637)
Marketing Letters (18, 3.426)	Psychological Review (1,419, 8.246)	Journal of Consumer Research (153.37, 8.612)
Journal of Behavioral Decision Making (16, 2.508)	Management Science (815, 6.172)	Journal of Marketing Research (120.81, 6.664)
Journal of Consumer Psychology (14, 4.551)	Organizational Behavior and Human Decision Processes (633, 5.606)	Psychological Review (118.25, 8.246)
Psychological Review (12, 8.246)	Journal of Consumer Psychology (566, 4.551)	Management Science (90.56, 6.172)
Organizational Behavior and Human Decision Processes (11, 4.941)	Memory and Cognition (426, 2.482)	Basic and Applied Social Psychology (85, 1.518)
Judgment and Decision Making (11, 2.500)	Psychological Science (411, 10.172)	American Economic Review (85, 11.490)
Psychology and Marketing (10, 5.507)	Marketing Letters (392, 3.426)	Psychological Science (82.2, 10.172)
Management Science (9, 6.172)	Journal of Political Economy (339, 9.637)	Proceedings of the National Academy of Sciences of the United States of America (81, 12.779)
Cognition (9, 4.011)	Psychology and Marketing (300, 5.507)	Organizational Behavior and Human Decision Processes (57.55, 5.606)
Frontiers in Psychology (9, 4.232)	Journal of Behavioral Decision Making (241, 2.508)	Journal of Retailing (55.5, 11.190)
Journal of Business Research (8, 10.969)	American Economic Review (170, 11.490)	Social Cognition (55, 1.636)
Marketing Science (6, 5.411)	Proceedings of the National Academy of Sciences of the United States of America (162, 12.779)	Theoretical Economics (53, 1.671)
Journal of Economic Psychology (6, 3.000)	Marketing Science (142, 5.411)	Trends in Cognitive Sciences (52.5, 24.482)

*Note.* This table lists the top 15 journals per total number of articles, total number of citations, average number of citation per article, and 2021 impact factors (Web of Science Group 2022).

(e.g., eye tracking). Finally, we excluded keywords that only occurred once (Maier et al. 2018), thereby reducing the number of keywords from 1,404 to 485.

Topic modeling using Latent Dirichlet Allocation (LDA, as proposed by Blei 2012; Blei et al. 2003) on the data<sup>4</sup> helped us identify overarching themes in context effect research. Following Mantyla et al. (2018), we ran the LDA 100 times and clustered the results with *k*-medoids. We reviewed LDA results with 10 to 18 topic clusters

<sup>4</sup> For the LDA, each article must provide at least one keyword, which leads to exclusion of *n* = 17 articles without any keywords.



**Table 4** Number of articles per effect and effect centrality in the co-occurrence network

Effect (nodes)	n (papers)	Degree centrality	Betweenness centrality
Attraction effect	256	143	12.17
Compromise effect	180	128	5.17
Phantom effect	27	32	0.67
Background contrast effect	10	14	0
Repulsion effect	10	14	0
Enriched/impooverished option	10	7	0
Common feature effect	7	0	0
Polarization effect	5	12	0
Zero-comparison effect	3	0	0
Lone alternative effect	2	3	0
Common attribute effect	2	0	0
Display set effect	1	1	0
Abrupt disparity effect	1	0	0
Jilting effect	1	0	0
Single option aversion	1	0	0
Upscaling effect	1	0	0

*Note.* This table lists the number of articles that investigate the particular context effect as well as the corresponding degree centrality and betweenness centrality.

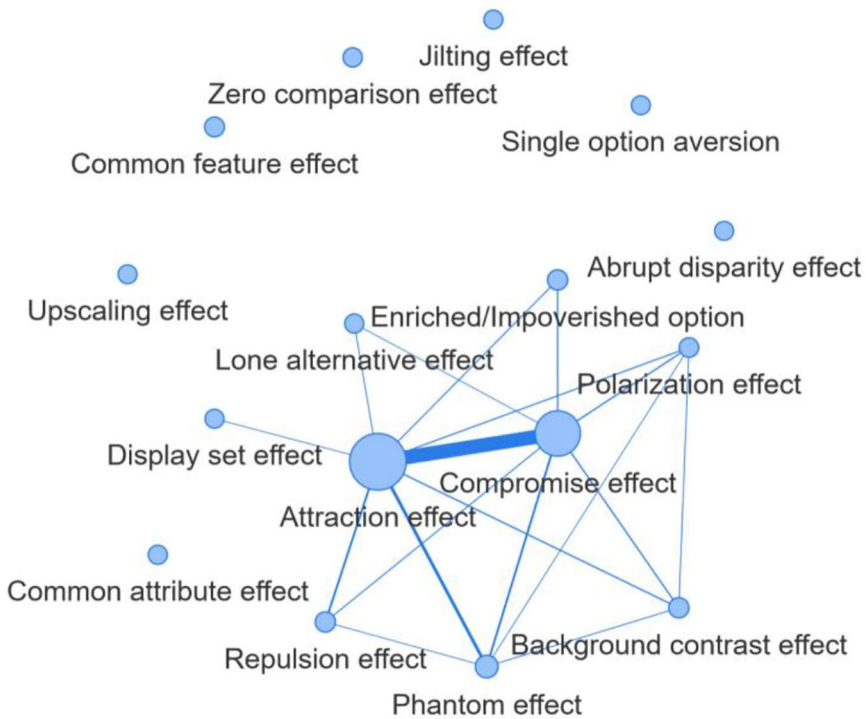
(TCs) and chose a solution with 13 TCs, which provided the best trade-off between detail and parsimony. Table 5 shows the top 10 keywords per TC, that describe the topics and a linear trend displaying a topic's growth, or its decline, between 1982 and 2022. To describe the TCs, we further evaluate articles that are highly associated with each topic (see supplementary material on the OSF for a full list).

#### 4.6.1 Topic cluster descriptions

We identify TCs that contain articles focusing on context effect conceptualizations and background processes, TCs focusing on specific applications, as well as TCs on choice modeling.

Several TCs focus on psychological research, evaluating the foundations of context effects and their initial description. Specifically, TC #1 covers (socio-)demographic moderators to context effects (e.g., age and gender; Sablotny-Wackershauser et al. 2020; Wu and Yu 2019), and also covers how other stable conditions (e.g., autism; Farmer et al. 2017) affect context effects. TC #5 covers more situation-specific moderators of context effects. Specifically, prominent research on this topic covers country-of-origin effects (e.g., Chuang and Yen 2007), moderators to the compromise effect, (e.g., serotonin deficiency, Lichters et al. 2016a; consequential choices, Lichters et al. 2016b), and assess specific decoy positions in the attribute space (Padamwar et al. 2018). TC #4 covers the background processes of economic judgment and decision-making. Among others, TC #4 includes articles outlining background processes for multiple context effects, such as the value shift framework and value-added framework (Pechtl 2009; Pettibone and Wedell 2000). Furthermore, prominent psychological models, such as tradeoff contrast (Simonson and Tversky 1992) and reference dependency (Hedgcock et al. 2016), belong to this TC. Providing a more





**Fig. 6** Context effect co-occurrence network

*Note.* The graph illustrates the co-occurrence network of the coded context effects investigated in the articles. Nodes were rearranged to improve readability. This does not affect the network's properties.

specific focus, TC #7 describes limited resources, self-control, and ego depletion in context effect research and relates to dual-process theories (e.g., Masicampo and Baumeister 2008; Pocheptsova et al. 2009). Moreover, covering another important aspect of decision-making, TC #8 focuses on context effect-related research on risky decision-making (e.g., Kreilkamp et al. 2021; Liu et al. 2020) as well as self-other decision-making (e.g., C.-C. Chang et al. 2012; Lu et al. 2017) with links to regulatory focus theory (e.g., Ryu et al. 2014). We further identify two TCs that relate to specific context effects. TC #6 covers the effects of common features on consumer choice (e.g., Chernev 2001; Su et al. 2012), TC #13 includes research on phantom decoys (e.g., Adam et al. 2019; Wessel et al. 2019) as well as the article on the jilting effect (Garvey et al. 2017). Except for TC #1, all of the above-mentioned TCs either exhibit a declining or stagnating relative research trend indicating that recent research moves toward applied research and choice modeling.

Several other topics refer to specific applications of context effect research. TC #3 covers research on consumers' purchase behavior and—in its most prominent articles—shows a special focus on food. Research in this cluster, for example, utilizes the compromise effect and extremeness aversion to counter obesity (e.g., Gill et al. 2022; Sharpe et al. 2008), explores restaurant choice and ratings (Otto et al. 2022),

**Table 5** Top 10 keywords per topic cluster

TC	Top 10 keywords	Trend
#1	male human; female; adult; young adult; controlled study; middle-aged; adolescent; human experiment; task performance; normal human	↑ †
#2	psychological model; statistics; psychological theory; bayesian methods; review; multialternative decision field theory model; theoretical model; reaction time; psychology; statistical analysis	→
#3	consumer attitude; food preferences; portion size; calories; health food; costs; nutrition; follow up; consumer behavior; catering service	→
#4	contrast; reversals; riskless choice; similarity; density; weights; hypothesis; bounded rationality; models; phantom alternatives	↓ *
#5	attribute balance; extremeness aversion; real payments; country of origin; brand entry; displays; tryptophan depletion; serotonin; balance; extensions	→
#6	unique features; direction; common feature; choice process; distortion; equate to differentiate; cancellation; focus; brand choice; knowledge	→
#7	limited resources; context-dependent preferences; ego depletion; rationality; self control; dual system; choice construction; behavioral decision theory; constructed preferences; regret	↓ †
#8	risk-taking; accountability; regulatory focus; reasons; justification; prevention; self; goals; distinction; promotion	↓ †
#9	selection; robustness; de-biasing; performance information; pay; field experiment; experiment; cognitive biases; travel behavior; numbers	↑ *
#10	robustness; reason-based choice; rational choice; revealed preference; individual decision making; incomplete preferences; weak axiom; experimental economics; risky choice; violations	↑ **
#11	multialternative decision; similarity effect; eye tracking; visual fixations; evidence accumulation; multialternative decision field theory model; computational models; preferential choice; psychological model; multialternative choice	↑ †
#12	revealed preference; incomplete preferences; sales; theorem; random choice; rational choice; sets; stochastic choice; product line; integer programming	↑ *
#13	out of stock; reward-based crowdfunding; early bird offers; scarcity; uniqueness; need; psychological reactance; phantom alternatives; involvement; promotion	→

*Note.* The table lists the 13 TCs with their top 10 keywords; trend codings (1982–2022): ↑ = positive trend, ↓ = negative trend, → = stagnating trend ( $p \geq 0.1$ ); significance codes: \*\*  $p < 0.01$ , \*  $p < 0.05$ , †  $p < 0.1$ .

or studies the zero-comparison effect in front-of-package labels (Graham and Mohr 2014). We find further applications in TC #9 and TC #10—both of which exhibit a positive trend. TC #9 relates to specific contexts, such as travel choices (Kim et al. 2019), human resource management (Cantarelli et al. 2020), and debt repayment plans (Harrison et al. 2021). Prominent research in TC #10 examines the attraction effect in gambles and lotteries (Castillo 2020; Colman et al. 2007 Sürücü et al., 2019)

and relates compromise and attraction effects in bargaining situations (Galeotti et al. 2021).

Further, we identify two TCs on choice modeling. Showing a stable research trend, TC #2 comprises formal choice models that, for example, focus on loss aversion (leaky competing accumulator; Usher and McClelland 2004) and includes discussions of these models (e.g., Tsetso et al. 2010). Corresponding to more recent research in choice modeling, TC #11 focuses on attention and perceptual processing (e.g., using eye-tracking data; Marini et al. 2020; Marini et al. 2023) and argues that attention is crucial for context effects (Trueblood 2022). This TC further includes the most recent discussions and advances in choice modeling (e.g., Bergner et al. 2019; Busemeyer et al. 2019; Wollschlaeger and Diederich 2020). Finally, TC #12 includes research on choice axioms that, for example, utilize partial dominance to explain the attraction effect (Gerasimou 2016b), model the attraction effect as avoidant behaviors similar to a status quo bias and choice deferral (Gerasimou 2016a), or provide insights on anticipated stochastic choice (Koida 2018). Of the above-mentioned TCs, TC #11 and TC #12 exhibit a positive trend, which indicates a growing research interest.

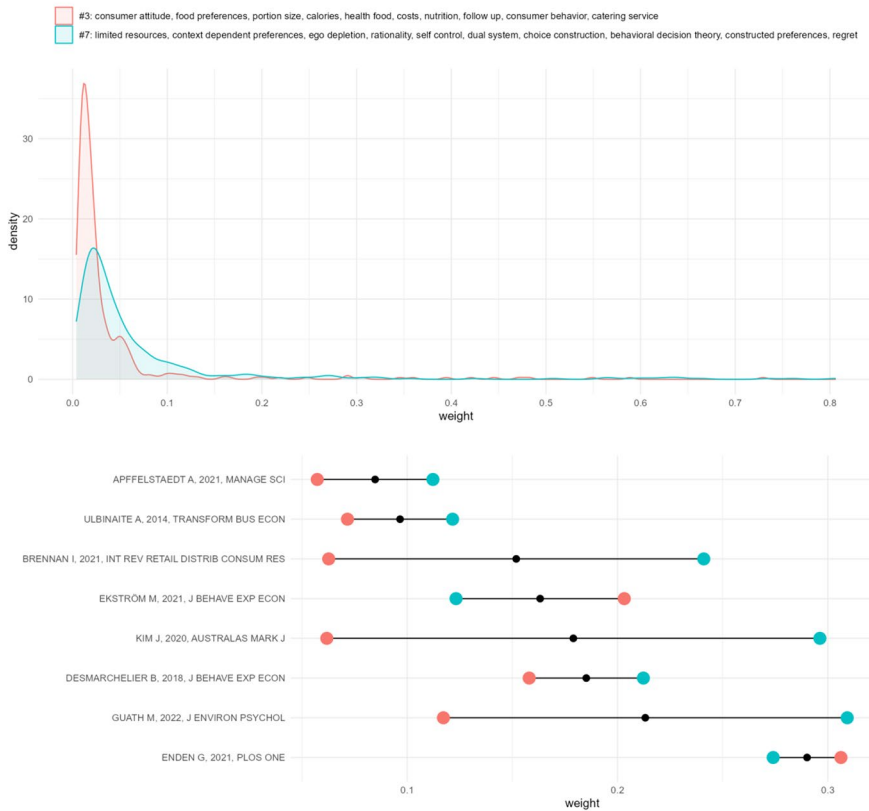
#### 4.6.2 Cross-topic analyses

We provide a cross-topic analysis identifying articles that bridge topics in the interactive R Shiny web application. This analysis allows for identifying articles that fit into two TCs. For example, analyzing the intersection between self-control and dual-process theories (TC #7) to consumers' purchase behavior (TC #3) generates the graphs in Fig. 7.<sup>5</sup> The figure's upper part shows each TC's weight distribution. As evidenced by the high density for lower weights, most papers show only a small relationship to each TC, while the distribution is much flatter if the weights are above 0.1. The lower part of the figure identifies intersecting articles by showing the weights of bridging articles for both topics. This helps identify whether an article is relevant to both TCs, or whether an article is particularly relevant to one (vs. the other TC; i.e., differences between weights).

A detailed analysis of Fig. 7. shows, for example, the article with the highest weight average (van den Enden and Geyskens 2021), which assesses attraction effects in a self-control-relevant situation (choosing healthy vs. unhealthy food) and finds that the attraction effect does not emerge in healthy food choice sets. Focusing on eco-friendliness, Guath et al. (2022) show that adding an asymmetrically dominated decoy option can nudge consumers more effectively toward eco-friendly choices than adding a default option. In another study involving default options, Kim et al. (2022) explored how time pressure affects consumers' choices for an asymmetrically dominating option that is either in line with or opposed to an external recommendation issued by a salesperson.

The results from this cross-topic analysis therefore go beyond the individual TCs and can help spur or develop research by providing a holistic assessment of TC intersections, that is not limited to a specific keyword or search string. In addition, the

<sup>5</sup> The analysis identifies prominent articles per TC and returns overlapping articles (i.e., articles that are prominent in both TCs). In this example, we assess the top 50 articles per TC.



**Fig. 7** Intersection between TCs #3 and #7

*Note.* The figure illustrates an example output for the intersections between TCs #3 and #7. Specifically, the upper part shows a density graph for article weight within each TC, and the lower part lists the bridging articles with the corresponding weights, indicated by colored dots; the black dot is the mean of the two weights).

analysis can draw attention to articles that have thus far received only limited attention in a specialist area of context effect research and may serve as a starting point for new research streams.

## 5 Discussion

### 5.1 Theoretical and managerial implications

To date, research on context effects has produced hundreds of empirical articles and several reviews that compile the state of research in the field. However, the literature lacks an overarching, data-driven description of the field with its scholarly networks, content structure, and themes. To address this research gap, we present the results of a bibliometric analysis that includes a performance analysis on top-tier authors, arti-

cles, and journals, as well as a collaboration analysis for authors and their affiliations. Furthermore, we examine the research field's content structure based on an article-specific effect coding and analyze each effect's prevalence as well as effect networks. We use a topic modeling approach based on article keywords to dive deeper into researched themes.

Our author network analysis on collaboration patterns reveals a fragmented collaboration network with large components that map onto different streams of research. These streams relate to the areas of choice modeling (e.g., *Jörg Rieskamp*, *Jerome R. Busemeyer*), the conceptual foundation of primarily the compromise and attraction effect (e.g., *Itamar Simonson*, *Amos Tversky*), applications in consumer research (e.g., *Shih-Chieh Chuang*, *Yin-Hui Cheng*), as well as moderators in context effect research (e.g., *Bodo Vogt*, *Marcel Lichters*).

An affiliation-based collaboration analysis shows that most context effect researchers are based in North America, followed by Europe and Asia, with only a few in South America and Oceania and none in Africa and Antarctica. International collaborations between North America and Europe are especially prevalent, with far less scientific “traffic” between the remaining continents. Our affiliation network showed that most context effect research originates in countries with Western, educated, industrialized, rich, and democratic (WEIRD; Hendriks et al. 2019; Henrich et al. 2010) societies. Accordingly, if we assume that most study samples originate in these societies, their results' generalizability to other cultures may be questionable (Henrich et al. 2010). We suggest extending the empirical footing of research on context effects, for example, by conducting cross-cultural studies (Henrich et al. 2010). Since context effects are susceptible to thinking styles and processing tendencies (Khan et al. 2011; Padamwar et al. 2023) that are known to differ between cultures (Nisbett and Miyamoto 2005), such research may help uncover further important moderators. Moreover, when building new collaboration networks in context effect research, we support Wojcik's (2022) call to further increase the equity of collaborations by enhancing the visibility of minoritized groups in academia.

We also find that most research focuses on the attraction effect (Huber et al. 1982) and the compromise effect (Simonson 1989), which have central positions in the co-occurrence networks. Current synthesizing research focuses on these effects but has overlooked less prominent context effects, which is why it is important to extend the scope of available literature reviews. Furthermore, researchers frequently investigate multiple context effects per article, for example, to outline conceptual similarities and disparities (e.g., Simonson and Tversky 1992) or to test common antecedents (e.g., Khan et al. 2011). This practice also extends to context effects with lower prevalence in research (e.g., the background contrast effect and the phantom decoy effect). However, we highlight that several effects (e.g., the jilting effect and the single option aversion) are investigated in isolation. These effects' interconnectedness opens up several research avenues.

First, consumers' simultaneous susceptibility to context effect phenomena may differ between the most established effects (i.e., compromise and attraction effect) and other context effects. For example, research shows that the compromise effect relies on effortful cognitive processes that compare different product attribute levels and aim to increase decision justifiability (Lichters et al. 2016a). Other context effects

might result from intuitive decision-making rather than from deliberate and demanding thought processes; for example, jilting effect-induced choice switches have not been linked to a conscious and effortful comparison between all options (available or forgone). Furthermore, research on the repulsion effect suggests that the effect is driven by perceptual processes rather than preferential processes (Spektor et al. 2018). This may explain why the effect has produced mixed results in product choice tasks, which sparked a discussion on its existence (Frederick et al. 2014; Huber et al. 2014; Liao et al. 2021; Simonson 2014).

Second, since research is scarce for several context effects and unifying empirical examinations are also largely absent, carry-over effects and interactions between context effects remain largely unexplored (see, e.g., Shen and Liu (2016) for carry-over effects between attraction and compromise effects). Closing this gap is especially pressing to establish conceptual clarity and discrimination between effects, such as the common attribute effect (Evangelidis and van Osselaer 2018) and the common feature effect (Chernev 1997), which require a seemingly similar experimental approach (adding common attribute levels) but are expected to elicit different choice processes (assessing an alternative's expected relative performance vs. individual attribute importance), which also results in contradicting predictions. Specifically, if the price is the most important attribute for decision makers, the common feature effect would predict a similar finding as the common attribute effect. In contrast, a negative common attribute effect (i.e., a higher choice likelihood for the more expensive alternative) may arise if a non-price attribute is more important than the price attribute. Here, adding a common attribute would increase the expensive alternative's attractiveness.

Third, utilizing the well-established justification account in context effect research to explain common features' influence on consumers' choice processes, Chernev (2001) proposed that attractive common features stabilize a consumer's already existing preferences (and vice versa). This confirmatory reasoning also applies to the upscaling effect (Evangelidis et al. 2022), which proposes that adding a symmetrical dominated decoy alternative encourages choosing an alternative that consumers tend to prefer but are hesitant to select. Further research may also test phantom alternatives in the upscaling effect paradigm, or further elaborate effects arising from different decoy positions. For example, recent research (Padamwar et al. 2018, 2021) highlights range effects in attraction and compromise effect paradigms that could, for example, be extended to phantom decoys.

Fourth, researchers should also acknowledge moderators that have proved to impact specific context effects (Schliwa and Ciornea 2020) when researching other effects. For example, in the context of the compromise effect, these include time pressure (Dhar et al. 2000) or regulatory focus (Ryu et al. 2014), which might generalize to other effects such as the common attribute effect. Furthermore, even established context effects, such as the attraction effect, have been subject to debate (e.g., Frederick et al. 2014; Huber et al. 2014; Simonson 2014). Given the contemporary efforts to foster replicability in consumer research (Bradlow et al. 2020; Inman et al. 2018), we encourage researchers to put the examination and replication of further context effects on their agenda. Such research projects should consider the difference

between theory and effect application (Calder et al. 1981) and implement corresponding procedures to safeguard the results' generalizability (Lichters et al. 2015).

Finally, to explore the context effect research further, we conducted a keyword-focused topic analysis that resulted in 13 TCs. We found that research on context effects can be assigned to three main themes: psychological research on the foundations of context effects and their initial description and background processes, applied behavioral and experimental research, and research describing formal choice models. The nature of these three themes and the author networks suggests a rather fragmented research field with some secluded areas of expertise. Researchers from different areas of expertise should therefore join forces to tackle the overarching research questions by considering, for example, important moderators and the field's latest methodological discussions (e.g., implementing experimental designs that foster external validity). Likewise, researchers in the field of psychology may test their theories by applying the rigorous incentive-aligned experimental procedures and product choices that researchers from behavioral and experimental economics typically rely on. In addition, context effect researchers working in corresponding fields should develop a platform for communication across borders.

## 5.2 Limitations

Our results are subject to several limitations due to the nature of bibliometric analyses. While we have included two major scientific databases (Web of Science and Scopus), searched additional references (Scopus's secondary documents), and manually included two articles, our results are still limited to the sources indexed in these databases, which are especially scarce for early context effect research. At the same time, articles that were published online, but not yet assigned to a journal issue in 2022, may induce minor changes in publication dates. We limited our bibliometric analysis to pre-defined journal subject areas, and therefore it would be interesting to explore the presence of context effect research in other, less related research areas, such as medicine, animal behavior, or arts and humanities. Our topic modeling specifically allows a description of the field's latent research themes but—as with any segmentation—assigning context effect research into 13 TCs also allows for a certain heterogeneity within each TC, which entails a tolerable loss of details. For example, while we find multiple TCs on choice modeling (TC #2 and #11), they do not distinguish between specific models (e.g., decision field theory, Roe et al. 2001; or the multiattribute linear ballistic accumulator model, Trueblood et al. 2014). We further identify only a small number of articles for specific context effects, which limits our results' generalizability to those effects. While this does not disturb our overarching analyses of the research field, effect-specific results that can be obtained from the web application must be interpreted carefully.

Finally, every bibliometric analysis entails analytic decisions, such as which inclusion criteria to apply or which algorithm settings to favor. However, to safeguard our results' validity and foster transparency, we have followed best practices in the field (Donthu et al. 2021) and made our data and analysis script available online (OSF: <https://osf.io/ghv4e>, interactive Shiny app: [https://mktg.shinyapps.io/CEbiblio\\_ShinyApp/](https://mktg.shinyapps.io/CEbiblio_ShinyApp/)) to facilitate future research that might make use of our analyses.



## 6 Conclusion

Several articles on context effects have had a considerable theoretical and practical impact by outlining and describing human decision-making in specific choice situations (e.g., Huber et al. 1982; Simonson 1989). Our bibliometric analysis provides a comprehensive overview of the research field, including its author and journal structures. The analysis also highlights latent themes that are not evident at first glance and assists researchers in navigating the context effect landscape. Our paper helps researchers identify points of connection to their own fields and facilitates the identification of promising research themes, cross-topic connections, and collaborators for future research projects. Our author and collaboration analyses will also help researchers identify collaboration opportunities and may be useful for suggesting scientific reviewers.

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**Data Availability** We provide all data and analysis scripts on the OSF (<https://osf.io/ghv4e>).

## Declarations

**Competing interests** The authors have no relevant financial or non-financial interests to disclose.

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