

# Position matters when we stand together: a linguistic perspective on composite brand extensions

Meng-Chun Tsai · Yung-Chien Lou · Lien-Ti Bei ·  
Kent B. Monroe

Received: 24 February 2013 / Accepted: 24 January 2014 / Published online: 11 March 2014  
© Academy of Marketing Science 2014

**Abstract** Composite branding extensions, wherein two existing brands ally themselves to create a composite brand name and enter a different product category, have become a common way to introduce a new product. An important managerial issue is deciding how to position the two brand names within the expression to communicate this alliance to consumers. Drawing on linguistic theories, this research explores how consumers may interpret different composite brand expressions relative to the positions of the two brand names in the expressions. We find that the brand in the initial position of most expressions is perceived as more closely associated with, and more responsible for the extension product than the other brand in the alliance. This perceived responsibility is also influenced by the perceived relative brand strengths, or the marketing abilities of both brands.

**Keywords** Composite brand extension · Initial brand · Head brand · Brand alliance · Meta-analysis

Brand alliance strategies involving an association or combination of two or more brands, products, or other assets (Rao and Ruekert 1994) have become common. Consumers' perceptions of the individual brands may carry over to the product or service of the alliance. The attributes or associations of the individual brands may be transferred to the co-branded product (e.g., Park et al. 1996). Brands in the alliance may also benefit from the cooperation of the success of the alliance (e.g., Simonin and Ruth 1998; Washburn et al. 2004).

Composite branding strategy, a form of brand alliance, refers to two existing brand names combining to create a compound brand name for a new product (Park et al. 1996). Many firms have used this strategy to develop or promote new products by integrating the expertise inherent in both brands. Most researchers suggest that selecting a better partner can enhance consumers' evaluations of the co-branded product or the brands themselves (e.g., Voss and Gammoh 2004; Walchli 2007). However, an important marketing issue after an alliance has been formed and the new product developed is to communicate the composite brand to consumers with an expression in advertising or on packaging. "Covergirl and Olay simply ageless foundation" and "Kellogg's Cinnabon pancakes" are two recent examples of composite brand alliance expressions. Take "Kellogg's Cinnabon pancakes" as an example, which brand will benefit from the success of this product? Which brand will a consumer blame if the product does not taste as good as he/she expected? Understanding consumers' perceptions toward a composite branded product is critical to both brands in an alliance.

People often confuse composite branding strategy with other terms related to branding, such as sub-brand and ingredient branding, because of the ambiguous boundary between

---

M.-C. Tsai (✉)  
Center for Public & Business Administration Education, National  
Chengchi University, 187, Jinhua St., Taipei City 106, Taiwan,  
Republic of China  
e-mail: 94355502@nccu.edu.tw

Y.-C. Lou · L.-T. Bei  
Department of Business Administration, National Chengchi  
University, 64, Sec. 2 ZhiNan Rd., Taipei City 11605, Taiwan,  
Republic of China

Y.-C. Lou  
e-mail: yjlou@nccu.edu.tw

L.-T. Bei  
e-mail: lienti@nccu.edu.tw

K. B. Monroe  
J. M. Jones Professor of Marketing Emeritus, University of Illinois  
at Urbana-Champaign, 11357 Nuckols Road, #128, Glen Allen,  
VA 23059, USA  
e-mail: kent@kentmonroe.net

the definitions. A sub-brand is a product brand that has its own name and identity to differentiate it from the parent brand, such as “Toyota Lexus” (Jo 2007). The sub-brand name can point out the difference or feature; using the corporate brand name as well also maintains the relationship between customers and the corporate (Aaker 2004). It should be noticed that this type of branding strategy cannot be categorized to any type of brand alliance because it is not a cooperation of two existing brands. There is a hierarchical relation between the corporate brand and the sub-brand. In other words, the sub-brand is owned by the corporate brand. In addition, “Intel inside” is a typical example of ingredient branding strategy, in which key attributes of one brand are incorporated into another brand as ingredients (Desai and Keller 2002). This is also one of the commonest types of brand alliance in the market. One brand will be taken as the host of the product, and the other will be considered only as a contributor of one or a few ingredients.

A composite brand extension is a specific situation in that the composite brand product is in a category that neither brand in the alliance has been in before. Consumers may interpret an expression in their own way forming perceptions about how the brands have cooperated with each other or which brand is more responsible for developing and marketing the new product. Using the expression “Slim-Fast chocolate cakemix by Godiva”<sup>1</sup> as an example, Park et al. (1996) demonstrate how consumers may interpret an expression. They first combine the product “chocolate cakemix” and the brand “Slim-Fast” to form a new concept “Slim-Fast chocolate cakemix” in their minds. Then they combine this new concept with the brand “Godiva” to create the final composite brand product concept. Consequently, consumers are more likely to associate the product with Slim-Fast because in the above process cakemix is connected with Slim-Fast earlier than with Godiva. Therefore, Slim-Fast’s attributes are more salient than Godiva’s for understanding the composite brand product. One inference based on this process is that consumers would perceive Slim-Fast as more responsible for developing and marketing the new product.

However, in this expression, Slim-Fast is also located in the initial position of the expression. Potentially, the stronger association between the product and Slim-Fast may also come from the word order of the composite brand expression. If the expression “Slim-Fast chocolate cakemix by Godiva” is changed to “Godiva’s Slim-Fast chocolate cakemix,” will the result be the same? Based on the above process, the product chocolate cakemix will be perceived as more closely associated with Slim-Fast than Godiva in both expressions. In the second expression, Godiva is now located in the initial position instead of Slim-Fast. Will consumers still perceive

the product as more closely associated with Slim-Fast than with Godiva? The purpose of our research is to clarify whether the composite concept formation process originally proposed or the word order as suggested here has more influence on consumers’ interpretation of the composite brand extension. To enhance the validity, several different expressions were used; four studies in Chinese and one study in English were conducted in Taiwan and the United States, respectively.

We begin by outlining the conceptual reasoning for the original conclusion that the new product will be perceived as more closely associated with Slim-Fast than Godiva in either expression. Then, we offer theoretical reasoning for why the new product will be perceived as belonging to the brand in the initial position of the expression. Drawing upon specific theories from linguistics, we also introduce several new terms as we develop the conceptual arguments. Next, we present five studies including several composite brand alliances and expressions in Chinese and English languages to evaluate these two conceptual arguments. We close by discussing the managerial implications of the findings.

## Conceptual development

A brand alliance is a general term that describes the cooperation between brands. Brand researchers have identified different types of brand alliances that cooperate to create a new product. One-third of the studies gave participants information about two brands launching a new product but did not indicate how the brands cooperated (e.g., Monga and Lau-Gesk 2007; Rao et al. 1999; Voss and Gammoh 2004). In another set of studies participants were told that one brand served as an ingredient in the other brand’s product (an ingredient brand alliance; e.g., Desai and Keller 2002; Rodrigue and Biswas 2004; Simonin and Ruth 1998). In the other studies participants were told that two brands introduced a new product together. They were also given a composite brand name, an expression describing two brands and one product (e.g., Esch et al. 2009; Geylani et al. 2008; Li and He 2013; Park et al. 1996; Washburn et al. 2000).

From consumers’ perspectives, the relationship between the brands in a composite brand alliance is the closest because the individual brand names are combined in the expression of the new product name. Consumers’ first impressions of the composite brand product come from this expression, for example, on the package or in advertising. How consumers process the expression to form the alliance concept may depend on the language structure of the expression, which is similar to the way people communicate with others (Carnie 2002). Therefore, linguistic theories are useful for thinking about how consumers form the composite brand concept in their minds.

<sup>1</sup> In the original article, cake mix was spelled as one word. We use the original expression and spelling as we develop the conceptual argument.

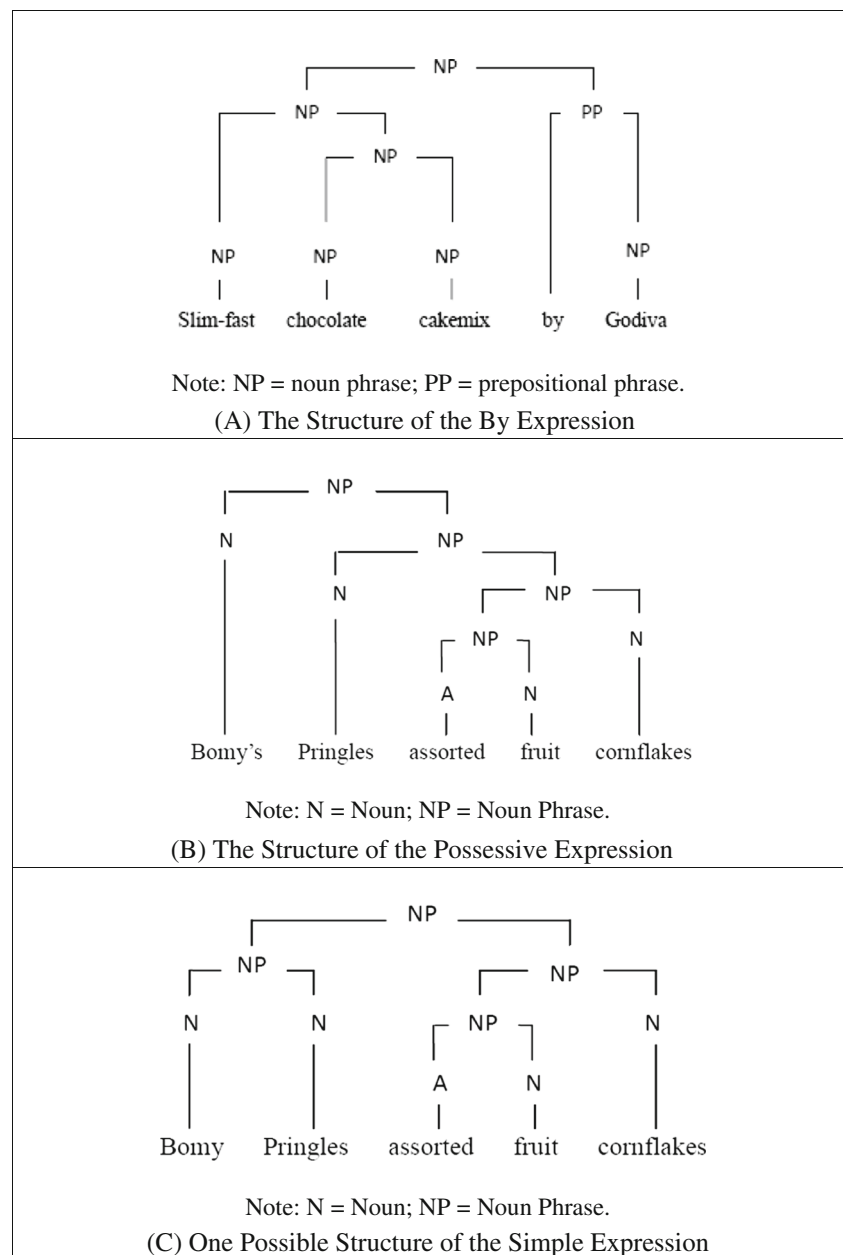
## The hierarchical structure

To understand the meaning of a phrase or a sentence, people first take the words that are more related to each other as a unit and then combine these separate units into a larger unit. A hierarchical structure of the phrase or the sentence is then formed after multiple combinations (Carnie 2002). People spend less cognitive effort when they adopt this nested concept formation process than when they combine all the concepts at one time. To analyze the structure of a phrase or a sentence in a syntax perspective, linguists often use a “linguistic syntax tree” to demonstrate it (see Fig. 1).

*The composite concept* A composite concept refers to a combination of two or more concepts to create a new meaning (Murphy 1988). One of these concepts is called the “head,” which is often a noun or pronoun. The head is modified by the other concepts referred to as the “modifiers.” Generally, in a noun phrase the modifiers can be located immediately before or after the head (Carnie 2002; Sweet 1903).

Three models may be used to describe how people form a composite concept. The *extensional model* (Osherson and Smith 1981; Zadeh 1965) represents a composite concept as the intersection of the sets corresponding to two or more independent concepts (e.g., pet fish). The *concept*

**Fig. 1** The structure of expressions



*specialization model* (Brachman 1979; Finin 1980) explains noun–noun conjunctions that are formed by a head and a modifier (e.g., apartment dog). The *selective modification model* (Smith et al. 1988) illustrates adjective–noun conjunctions (e.g., red apple).

*The composite brand concept formation process* The components of a composite brand product typically include two brands and one product. Since each component is an independent concept, the expression for a composite brand product can be viewed as a composite concept or a noun–noun conjunction. Figure 1a illustrates how the concept specialization model can be modified to demonstrate how consumers may interpret a composite brand extension expression. When consumers are exposed to the expression “Slim-Fast chocolate cakemix by Godiva,” the nested formation process will be triggered non-consciously and automatically to help them form an impression about the composite concept. That is, they will combine chocolate and cakemix into a single unit first and then connect this new concept with Slim-Fast to form a greater unit. Finally, the new concept and the prepositional phrase “by Godiva” will be linked to create a new meaning.

Consistent with the theories, we use the terms “head brand” and “modifier brand.” In the example above, Godiva is the modifier brand and Slim-Fast is the head brand because the product, cakemix, is connected with Slim-Fast earlier than with Godiva in the concept formation process. According to the results of Park et al. (1996), participants perceived the extension product as more closely associated with the head brand than the modifier brand. Thus, the head brand’s attributes had a stronger influence on the new product than the modifier brand’s attributes did.

#### Proximity iconicity

While the composite concept formation process can be used to analyze the hierarchical structure of language, the lineal structure, or word order, is also essential for people to express themselves or understand others’ thoughts. When there are more than two modifiers in a noun phrase, the word order depends on the relationship between the head and the modifiers (Valois 2006). The most objective and explicit modifier, exhibiting the intrinsic characteristics of the head without comparison with other things, will be *near* the head. The most subjective and implicit modifier, which is clarified by comparing the head with other things, will be *away* from the head (Hetzron 1978; Sproat and Shi 1988; Zhang 1998). This order, called “proximity iconicity,” is common in Chinese, English, and other languages. For example, most people will use “the big red apple” rather than “the red big apple” when describing an apple. The apple can be defined as red in color without comparison with other objects. However, people need to compare it with other things to judge its relative size.

Whether we interpret a composite brand extension expression using the concept formation process or the rule of proximity iconicity, consumers’ perceptions of the expression should exhibit a similar pattern. The head brand is located close to the extension product, so consumers will connect it with the product before linking the modifier brand with the product. If so, consumers will perceive the head brand as more closely associated with the product and view the extension product as the head brand’s product. Thus:

- H1a: When exposed to the expression of a composite brand extension, consumers will perceive the product as more closely associated with the head brand than with the modifier brand.
- H1b: Consumers will perceive the head brand in the expression of a composite brand extension as being more responsible for the product than the modifier brand.

*The confusion of the head brand assignment* It should be noted that the definition of the head brand and the modifier brand is ambiguous in previous research. For example, Park et al. (1996) asked participants in a pretest to rate the degree of ownership of the composite brand extension product and the degree of association of the product with each brand. In both expressions of their study, “Slim-Fast chocolate cakemix by Godiva” and “Godiva chocolate cakemix by Slim-Fast,” the brand appearing before the product was perceived as more closely associated with the product. As a result, the researchers assigned the first brand in the expression as the head brand. However, Jones (2004) adopted this same process and found that consumers perceived the extension product as more closely associated with Slim-Fast in both cases. Thus, he concluded that Slim-Fast was the head brand regardless of whether it appeared before or after the product.

This procedure to determine the head brand in a composite brand expression raises some concerns. First, if the assignment of the head brand and the modifier brand is based on empirical results, it may violate relevant linguistic theory. Second, consumers’ perceived association between each brand and the extension product may also be influenced by the relative perceived familiarity, likability, or extendibility of the two brands. Thus, we use linguistic theory and assign the head brand and the modifier brand by their respective locations in the composite brand expression, instead of the empirical results of the association between the two brands and the product. Doing so enables us to clarify the effect of the head brand and investigate the interaction of syntax and other marketing factors.

*The confusion of the theory application* Confusion can occur not only in the assignment of the head brand and the modifier brand but also in the way previous studies were conducted.

Both Jones (2004) and Uggla (2004) use “modified brand” to demonstrate consumers’ interpretation of an ingredient brand (e.g., ECCO shoes with GORE-TEX fabric). Although more expressions were used in these studies, it seems less appropriate to adopt this concept in an ingredient branding context. Consumers likely know that the host brand produces the end product, thereby assuming responsibility for the co-branded product in production or marketing. Thus, it is reasonable that most consumers will perceive the host brand as more closely associated with the product. The syntax structure here would play a minor role in consumers’ perceptions of ingredient branding alliances.

This confusion of using the model of composite brand extension to interpret an ingredient branded product also occurred in Park et al. (1996). They proposed that consumers’ attitude toward the head brand would be more positive after exposure to the composite brand extension, but would be a smaller effect for the modifier brand. They found this effect only in the condition of “Slim-Fast chocolate cakemix by Godiva.” When the brands’ positions were changed to “Godiva chocolate cakemix by Slim-Fast,” the head brand Godiva was not perceived as more favorable in the alliance. They explained this outcome by suggesting that the participants might perceive Godiva’s chocolate as an ingredient in the alliance. Thus, the attitude change of the host brand Slim-Fast was enhanced when it was the head brand in the first expression. But, in the second expression, when Godiva was the head brand, it remained a secondary component of the product in consumers’ minds. This is exactly the situation mentioned previously that an ingredient branded product can also be a composite branded one. In these cases, the linguistic theories might not be the most appropriate foundation to explain consumers’ perceptions. To minimize the possibility that the participants would consider the stimulus an ingredient brand alliance, we selected an extension product and two brands with equivalent extendibility.

*The confound effect of the head brand and its location* Although the head brand seemed to have a stronger influence than the modifier brand in previous research, the head brand was also located in the first place of most composite brand expressions. Based on the way previous researchers assigned the head brand in their experiments, there might be a confound effect from its location. The effect from the head brand per se as well as its location in the expression could not be separated and recognized clearly. In other words, there will be a possibility that the effect comes from the location of the head brand instead of being the head brand. What will happen if the head brand does not stand in the beginning of the composite brand expression? Will consumers still perceive the product as more closely associated with Slim-Fast than with Godiva when using the expression “Godiva’s Slim-Fast chocolate cakemix?”

By clarifying these three confusions and avoiding the confounding issues caused by them, we could improve the current research when investigating consumers’ perceptions toward composite brand extension expressions. First, the methodology could be improved by selecting proper stimuli that would not be considered as ingredient branded product. More factors could be controlled in the experiments so the results could be attributed to the linguistic theories we proposed. Furthermore, the first and the third confusions lead to the second set of competing hypotheses as the following. The head and the modifier brands should be assigned based on the theory and before the analysis. Then the effect showed in the empirical results could be attributed more correctly based on the theory.

#### Initial position

As mentioned previously, in the expression “Slim-Fast chocolate cakemix by Godiva,” the head brand was located in the initial position. A reasonable question is, does the effect come from the head brand or from this brand also being in the initial position?

Not only does the word order represent syntax rules and express semantic meaning, it also conveys the interest, involvement, and focus of speakers (Osgood 1980; Sweet 1903; Tai 2002). When communicating with others, English speakers often put the words they want to emphasize at the beginning of a sentence (Osgood 1980). Connolly (1991) maintains that information people already know is usually at the beginning, new information appearing later in a sentence. The meaning of the words in the initial position often reveals the theme of the sentence (Fries 1995; Grimes 1986) or the scope of the later words (Crompton 2006). In comparison, Chinese is a topic-prominent language as the theme is always in the initial position of a sentence. Communicators often assume that receivers know the information appearing first (Chao 1968; Her 1991; Li and Thompson 1981).

According to this syntax rule, consumers may have some beliefs about the initial brand—the brand in the initial position of a composite brand expression. For example, in “Slim-Fast chocolate cakemix by Godiva,” consumers may think that Slim-Fast invited Godiva to be in the alliance, and that the extension is a part of Slim-Fast’s product line because of two brands’ position in the expression. Thus, the association between the product and Slim-Fast will be perceived as closer than the product and Godiva. Consumers will also believe that Slim-Fast is more responsible for the product and for its marketing than is Godiva. Conversely, if the two brands switch their locations in the expression, Godiva will be the initial brand. Now according to this syntax rule it will be perceived as more closely associated with and having more responsibility for the product than Slim-Fast. Li and He (2013) also mentioned that when a brand alliance is established due to a joint venture or a merger, the brand of



the party with stronger power and dominance would normally precedes the brand of the other party in a composite name. Power is often associated with responsibility. Thus the preceding brand would be perceived more responsible for the performance of the alliance product. Therefore, we propose a competing set of hypotheses:

- H2a: When exposed to the expression of a composite brand extension, consumers will perceive the product as more closely associated with the initial brand than with the other brand.
- H2b: Consumers will perceive the initial brand in the expression of a composite brand extension as being more responsible for the product than the other brand.

These two sets of hypotheses derive from different linguistic theories. The head and modifier brand hypotheses, H1a and H1b, are based on the composite concept formation process and the relative positions of both brands and the product in a composite brand expression. However, the initial brand hypotheses, H2a and H2b, pertain to the absolute position of one brand in the composite brand expression. These competing hypotheses are not necessarily related. For example, in “Slim-Fast chocolate cakemix by Godiva,” Godiva is the modifier brand, and Slim-Fast is both the head brand and the initial brand. However, in “Godiva’s Slim-Fast chocolate cakemix,” Slim-Fast remains the head brand, but now the modifier brand Godiva stands in the initial position. Determining whether the effect is due to the head brand *per se* or to the brand in the initial position requires separating the two concepts, and pitting the two sets of hypotheses directly against each other. The studies we report next use this concept of strong inference (Rosenthal and Rosnow 1991).

### Study 1: the association between each brand and the extension product

#### Stimuli creation and procedure

The purpose of Study 1 is to test the two competing hypotheses H1a and H2a. Students from a university in Taiwan participated in the experiment in Chinese language with an incentive of a lucky draw equivalent to US\$6. To avoid the confusion of theory application mentioned previously, equivalence of perceived extendibility from both brands to the product in the experiment should be a crucial criterion when selecting the stimuli. Further, to prevent participants from perceiving one of the two brands as a sub-brand, pretests were conducted to choose two brands with the same perceived familiarity and likability. The measurements are from Park et al. (1996). Based on the results, we selected Bomy and Pringles as the brands in the alliance and assorted fruit

cornflakes as the extension product (familiarity: Bomy=5.57, Pringles=6.00,  $t(20)=1.07$ ; likability: Bomy=4.86, Pringles=5.14,  $t(20)=0.62$ ; extendibility: Bomy=3.79, Pringles=3.58,  $t(18)=0.51$ ; all  $ps>.10$ ). Bomy is the number-one brand of fruit and vegetable juice in Taiwan, emphasizing a healthy and balanced diet for people who eat out.

In the pretests, the participants were also asked to write down the attributes, characteristics and free associations of those candidate brands. By doing this, the brand associations could be considered when selecting products and brands. The two brands’ associations should be equally related/ unrelated to the extension product. Besides the original product categories juice and chips, Bomy was considered nutritious, healthy and fresh; Pringles was perceived crispy, salty and greasy. Though it was necessary and reasonable that some of the attributes of both brands should be able to transfer to the new extension product, none of participants’ associations of both brands were related to the extension product directly. Further, the most frequent associations of both brands were intrinsic attributes of their original products, not the celebrities in the commercials or other extrinsic characteristics.

There were two expressions and two brand orders in Study 1. Participants were randomly assigned to one of the four groups. We used two common Chinese expressions (see Table 1): “Bomy presents Pringles assorted fruit cornflakes”<sup>2</sup> (“the verb expression”) and “Bomy Pringles assorted fruit cornflakes” (“the simple expression”). In these expressions, Bomy was the initial brand, and Pringles was the head brand. When order of the two brands in each expression was reversed for the other two treatments, Pringles was the initial brand, and Bomy was the head brand. Doing this permits separating the strengths of the head brand and the initial brand, clarifying the effect of the head brand relative to the initial brand.

Initially, the participants (55 men and 104 women; average age 20.45 years) were told that they would be asked to indicate their attitudes toward several brands. They were shown one of the composite brand extension expressions and told that two brands were introducing a new product together. Then, using seven-point scales, they rated (1) the perceived association between brands and product (−3 = “associated more with Bomy,” 3 = “associated more with Pringles”) and (2) ownership of the extension product (−3 = “still Bomy,” 3 = “still Pringles”). Finally, they rated their familiarity (1 = “never heard of it,” 7 = “very familiar”), likability (1 = “extremely dislike,” 7 = “extremely like”), and previous purchase experience (1 = “never bought it,” 7 = “purchased often”) with the two brands.

<sup>2</sup> In the Chinese version of “Bomy presents Pringles assorted fruit cornflakes,” the verb was transformed and the function was similar to an adjective. Because this was still a noun phrase rather than a complete sentence, the linguistic theory of the composite concept also applies in this case.

**Table 1** Sample sizes

	Study 1 A = Bomy B = Pringles	Study 2A A = Bomy B = Pringles	Study 2B A = Bomy B = Lay's	Study 2C A = Lin Feng Ying B = Pringles	Study 3 A = Tropicana B = Pringles
The Initial Brand = Brand A					
The verb expression Brand A presents Brand B product	40	59	54	33	–
The possessive expression Brand A's Brand B product	–	55	52	31	36
The simple expression Brand A Brand B product	40	43	44	27	44
The hyphen expression Brand A-Brand B product	–	–	–	–	43
The by expression Brand A product by Brand B	–	–	–	–	36
The Initial Brand = Brand B					
The verb expression Brand B presents Brand A product	41	55	55	28	–
The possessive expression Brand B's Brand A product	–	58	47	30	37
The simple expression Brand B Brand A product	38	41	43	27	43
The hyphen expression Brand B-Brand A product	–	–	–	–	43
The by expression Brand B product by Brand A	–	–	–	–	37
Total sample size	159	311	295	176	319

## Results and analyses

The evaluations of association and ownership were used and viewed as the representative of the association between the product and the two brands in Park et al. (1996). We followed Park et al. (1996) and averaged the association and ownership items into one score (Cronbach  $\alpha=.78$ ). H1a and H2a propose competing predictions about the relative strength of the initial and head brands toward the perceived association between two brands and the extension product in a composite brand expression. If the association score is negative, the more the product is perceived as associated with Bomy. If the score is positive, the more the product is perceived as associated with Pringles.

T tests comparing the association scores against zero were conducted. When the initial brand was Bomy (Pringles was the head brand), the average association score of the simple expression was significantly negative ( $M=-.73$ ,  $SD=1.76$ ,  $t(39)=-2.61$ ,  $p=.01$ ,  $r=.23$ ). However, the score of the verb expression was slightly positive but not significant ( $M=0.03$ ,  $SD=1.79$ ,  $t(39)=0.09$ ,  $p=.47$ ,  $r=.01$ ). When the initial brand was Pringles (Bomy was the head brand), the association scores of both expressions were significantly greater than zero ( $M_{verb}=0.74$ ,  $SD=2.01$ ,  $t(40)=2.37$ ,  $p=.01$ ,  $r=.35$ ;  $M_{simple}=1.41$ ,  $SD=1.54$ ,  $t(37)=5.65$ ,  $p<.01$ ,  $r=.68$ ). This result

indicates that the participants associated the extension product more closely with Pringles.

We conducted additional t tests to compare the scores between two brand orders. If the scores of two brand orders are significantly different, it means the perceived association scores shift when Bomy and Pringles exchange their positions in the expression. The result of the simple expression indicates that when Pringles was the initial brand (Bomy was the head brand), the association score was significantly higher than when Bomy was the initial brand (Pringles was the head brand) ( $t(76)=5.69$ ,  $p<.01$ ,  $r=.55$ ). We found a similar pattern for the verb expression ( $t(79)=1.70$ ,  $p=.05$ ,  $r=.19$ ). That is, participants believed that the initial brand owned the co-branded product and associated the product more closely with the initial brand than the head brand. Thus, H2a is supported; the initial brand exhibited more strength than the head brand in a composite brand extension expression.

In Study 1, we used two expressions that differ from those in previous research. Doing this enabled us to separate and test the strengths of the initial brand and the head brand, especially using the simple expression “Bomy Pringles assorted fruit cornflakes,” because no unnecessary meaning is provided in this expression. The results show a strong association between the composite brand extension product and the initial brand (rather than the head brand). This association implies that the

strength of the head brand in the previous research was also due to the location of the head brand in the initial position.

### Studies 2A, 2B, and 2C: responsibility for the extension product

#### Stimuli creation and procedure

The purpose of Studies 2A, 2B, and 2C is to test the two competing hypotheses H1b and H2b. Pretests, including brand familiarity, likability and the extendibility of both brands, were conducted again to reconfirm the stimuli of Study 1 could be used in Study 2A (familiarity: Bomy=5.46, Pringles=5.86,  $t(27)=1.34$ ; likability: Bomy=4.25, Pringles=4.80,  $t(39)=1.66$ ; extendibility: Bomy=4.21, Pringles=3.82,  $t(27)=0.82$ ; all  $ps>.10$ ). Similar to Study 1 the participants were also students in Taiwan with an incentive of a lucky draw. We used three expressions and two brand orders in Study 2A. The participants were randomly assigned to the six groups. In addition to the two expressions used in Study 1, we included a new expression “Bomy’s Pringles assorted fruit cornflakes” (“the possessive expression”), an expression that is also common in Taiwan (see Table 1). The participants saw one of the expressions and were told that the two brands were introducing a new product together. Then, the participants evaluated the degree of overall and marketing responsibility of both brands in the alliance for the extension product ( $-3$  = “Bomy takes all the responsibility,”  $3$  = “Pringles takes all the responsibility”).

To map the perceived structure of the expression in the participants’ minds, we asked them to choose a break point in the expression if they needed to pause when reading the expression aloud (see Appendix). Their answers to this question can be taken as a proxy of the language structure in their minds. Finally, they rated the familiarity, likability, purchase experience and extendibility to the extension product of both brands on seven-point scales.

The design and procedure of Study 2B was the same as Study 2A. However, Pringles seemed to be more favored and familiar than Bomy in Study 2A (familiarity: Bomy=5.03, Pringles=5.49,  $t(308)=6.04$ ,  $p<.01$ ; likability: Bomy=4.45, Pringles=4.95,  $t(310)=5.28$ ,  $p<.01$ ). Unequal likability of two brands in an alliance may influence the perceived responsibility score. Thus, pretests were conducted again to choose other proper stimuli. After pretests we chose Lay’s to be Bomy’s partner in Study 2B (familiarity: Bomy=5.78, Lay’s=5.83,  $t(17)=0.19$ ; likability: Bomy=4.39, Lay’s=5.00,  $t(17)=1.42$ ; extendibility: Bomy=4.17, Lay’s=4.11,  $t(17)=0.11$ ; all  $ps>.10$ ). The associations of Lay’s were quite similar with Pringles’.

The design and procedure of Study 2C was the same as Studies 2A and 2B. However, the product “assorted fruit

cornflakes” in Studies 1, 2A, and 2B may have been difficult for the participants to process. Since Lay’s was still perceived as more familiar and favored than Bomy in Study 2B (familiarity: Bomy=4.98, Lay’s=5.50,  $t(285)=6.48$ ,  $p<.01$ ; likability: Bomy=4.51, Lay’s=5.06,  $t(294)=6.28$ ,  $p<.01$ ), in Study 2C we chose Lin Feng Ying and Pringles to be the brands, and the extension product was cup soup (familiarity: Lin Feng Ying=5.06, Pringles=5.12,  $t(32)=-.34$ ; likability: Lin Feng Ying=5.00, Pringles=4.85,  $t(33)=0.55$ ; extendibility: Lin Feng Ying=2.97, Pringles=2.88,  $t(33)=0.32$ ; all  $ps>.10$ ). Lin Feng Ying is the number-one brand in Taiwan’s high-price milk market. The brand emphasizes high quality and rich taste. Based on the results of pretests, the associations of Lin Feng Ying were pure, rich, and tasty.

#### Results and analyses

In Studies 2A, 2B, and 2C the participants chose a pause point in the expression. The underlying language structure could be determined by the pause point to demonstrate the existence of the head brand. If a participant paused between two brands in the expression, it can be inferred that the brand appearing after the initial brand is the head brand because it was connected with the product first. However, if the two brands were combined first, the participants would pause before the extension product. This pause would indicate that there was not a head brand in their minds because they separated the product from the two brands in the initial combination. Participants who paused illogically between two Chinese words that belonged to one term were excluded in the following analyses. For example, “Lin Feng (pause) Ying’s Pringles cup soup” would be an illogical answer because “Lin Feng Ying” is a brand name and the three words should not be processed separately. Overall, 287 men and 495 women; average age 19.86 years were included in the analyses.

*The language structure* Table 2 shows how the participants connected the three concepts in an expression at the beginning of the composite concept formation process. The results of the verb and the possessive expressions were quite similar. (See Fig. 1b for the language structure of the possessive expression, which is also similar to the structure of the verb expression.) In the verb expression, more than 90% of the participants paused between the two brands, meaning they combined the head brand and the product first. For the possessive expression, although 37.11% of participants in Study 2A (Bomy and Pringles) and 14.28% in Study 2B (Bomy and Lay’s) paused before the extension product, most participants paused between the two brands. These results show that there was a common language structure in most consumers’ minds when exposed to the verb and the possessive expressions. They first combined the product and the head brand, which is close to



**Table 2** The pause point in expressions

	Study 2A (%)	Study 2B (%)	Study 2C (%)	Study 3 (%)
The verb expression: A presents B product				
Combine the head brand and the product first	90.63	94.29	95.08	–
Combine two brands first	9.37	5.71	4.92	–
The possessive expression: A's B product				
Combine the head brand and the product first	85.72	62.89	96.67	64.38
Combine two brands first	14.28	37.11	3.33	35.62
The simple expression: A B product				
Combine the head brand and the product first	8.23	7.95	70.37	51.72
Combine two brands first	91.77	92.05	29.63	48.28
The hyphen expression: A-B product				
Combine the head brand and the product first	–	–	–	33.72
Combine two brands first	–	–	–	66.28
The by expression: A product by B				
Combine the initial brand and the product first	–	–	–	93.15
Combine the latter brand and the product first	–	–	–	6.85

the product. Therefore, the head brand does exist in their minds.

Regardless of whether the participants paused between or after the two brands, either composite formation process is reasonable for the simple expression. There are no semantic clues for consumers to decide whether to combine the two brands (see Fig. 1c) or the head brand and the product first (similar to the structure of the possessive expression in Fig. 1b) when exposed to the simple expression. The language structure of the simple expression in their minds could be influenced by the relative length of the product or brand name. The co-branded product's name in Studies 2A and 2B (assorted fruit cornflakes) was longer than the product's name in Study 2C (cup soup). As a result, in Studies 2A and 2B for the simple expression, most people tended to combine the two brands first, and paused before the product. However, in Study 2C most participants chose to combine the head brand and the product first and paused between the two brands.

**Perceived responsibility** H1b and H2b contrast the competing strength of the initial and head brands toward the perceived responsibility for the product in a composite brand extension expression. Table 3 presents the results of the t tests comparing the responsibility scores with zero. If the mean score was less than zero, participants considered brand A (Bomy or Lin Feng Ying) more responsible for the co-branded product. If the score was greater than zero, they perceived brand B (Pringles or Lay's) as having more responsibility for the product.

The results of the t tests for the verb and possessive expressions were quite similar. Most of the mean scores of the overall and marketing responsibility support H2b, the initial position hypothesis, especially when the international brand,

Pringles or Lay's, was the initial brand. However, in Studies 2A and 2B, most scores of the simple expression are greater than zero. When a strong international and a relatively weaker national brand launch a new product with a product name as in the simple expression, regardless of which brand is in the initial position, consumers will perceive the stronger international brand as having more responsibility (Study 2A: familiarity: Bomy=5.02, Pringles=5.56,  $t(498)=8.93$ ,  $p<.01$ ; likability: Bomy=4.44, Pringles=4.97,  $t(498)=7.08$ ,  $p<.01$ . Study 2B: familiarity: Bomy=4.96, Lay's=5.38,  $t(448)=6.34$ ,  $p<.01$ ; likability: Bomy=4.49, Lay's=5.10,  $t(448)=9.83$ ,  $p<.01$ ; marketing ability: Bomy=4.86, Lay's=6.04,  $t(448)=18.07$ ,  $p<.01$ ). In Study 2C, the strength of the initial brand was more obvious because the local brand Ling Feng Ying is also strong and perceived to perform well in marketing in Taiwan (familiarity: Lin Feng Ying=5.82, Pringles=5.71,  $t(175)=1.28$ ,  $p>.10$ ; likability: Lin Feng Ying=5.65, Pringles=5.19,  $t(176)=3.98$ ,  $p<.01$ ; marketing ability: Lin Feng Ying=5.88, Pringles=5.62,  $t(176)=2.66$ ,  $p<.01$ ).

Table 4 shows the results of the t tests comparing the perceived responsibility scores between two brand orders in one expression. If the score when brand B was the initial brand (brand A was the head brand) was significantly higher than when A was the initial brand (B was the head brand), the participants perceived the initial brand as being more responsible for the product. That is, when one brand's position was changed from the initial brand to the head brand, the perceived responsibility shifted to the other brand in the alliance.

The results of the verb and the possessive expressions support H2b, the initial position hypothesis. Most of the responsibility scores were significantly higher when brand B (Pringles or Lay's) was the initial brand than when brand A (Bomy or Lin Feng Ying) was in the initial position. However,

**Table 3** Results of analyses for absolute responsibility in Studies 2A, 2B, and 2C

	Study 2A			Study 2B			Study 2C		
	Brand A = Bomy			Brand A = Bomy			Brand A = Lin Feng Ying		
	Brand B = Pringles			Brand B = Lay's			Brand B = Pringles		
A = Initial	The verb expression : Brand A presents Brand B product								
Responsibility	<i>M (SD)</i>	<i>t</i> (58)	<i>r</i>	<i>M (SD)</i>	<i>t</i> (53)	<i>r</i>	<i>M (SD)</i>	<i>t</i> (32)	<i>r</i>
Overall	0.03(1.81)	0.14	.02	−0.50(1.66)	−2.22**	.29	−0.82(1.57)	−2.99***	.47
Marketing	−0.29(1.90)	−1.16	.15	−0.43(2.02)	−1.55*	.21	−0.52(1.64)	−1.80**	.30
B = Initial	The verb expression : Brand B presents Brand A product								
Responsibility	<i>M (SD)</i>	<i>t</i> (54)	<i>r</i>	<i>M (SD)</i>	<i>t</i> (54)	<i>r</i>	<i>M (SD)</i>	<i>t</i> (27)	<i>r</i>
Overall	0.67(1.69)	2.95***	.37	1.56(1.03)	11.24***	.84	0.82(1.79)	2.43**	.42
Marketing	1.20(1.28)	6.94***	.69	1.87(1.12)	12.37***	.86	1.58(1.23)	6.76***	.79
A = Initial	The possessive expression : Brand A's Brand B product								
Responsibility	<i>M (SD)</i>	<i>t</i> (54)	<i>r</i>	<i>M (SD)</i>	<i>t</i> (51)	<i>r</i>	<i>M (SD)</i>	<i>t</i> (29)	<i>r</i>
Overall	−0.33(1.82)	−1.34*	.18	−0.62(1.81)	−2.46***	.33	−0.50(1.53)	−1.80**	.32
Marketing	−0.29(1.94)	−1.11	.15	−0.08(1.83)	−0.30	.04	−0.32(1.78)	−1.01	.18
B = Initial	The possessive expression : Brand B's brand A product								
Responsibility	<i>M (SD)</i>	<i>t</i> (57)	<i>r</i>	<i>M (SD)</i>	<i>t</i> (46)	<i>r</i>	<i>M (SD)</i>	<i>t</i> (29)	<i>r</i>
Overall	0.88(1.53)	4.37***	.50	1.04(1.23)	5.80***	.65	0.37(1.75)	1.15	.21
Marketing	1.12(1.48)	5.78***	.61	1.19(1.23)	6.66***	.70	1.53(1.22)	6.86***	.79
A = Initial	The simple expression : Brand A brand B product								
Responsibility	<i>M (SD)</i>	<i>t</i> (42)	<i>r</i>	<i>M (SD)</i>	<i>t</i> (43)	<i>r</i>	<i>M (SD)</i>	<i>t</i> (26)	<i>r</i>
Overall	0.33(1.55)	1.37*	.15	0.45(1.58)	1.91**	.26	−0.30(1.46)	−2.50***	.44
Marketing	0.44(1.62)	1.79**	.27	1.09(1.48)	4.90***	.59	0.41(1.65)	1.29	.25
B = Initial	The simple expression : Brand B brand A product								
Responsibility	<i>M (SD)</i>	<i>t</i> (40)	<i>r</i>	<i>M (SD)</i>	<i>t</i> (42)	<i>r</i>	<i>M (SD)</i>	<i>t</i> (26)	<i>r</i>
Overall	0.49(1.43)	2.18**	.36	1.09(1.48)	4.85***	.60	−0.19(1.57)	−0.61	.07
Marketing	0.46(1.36)	2.18**	.28	1.19(1.33)	5.84***	.67	0.26(1.56)	0.86	.16

The range of the mean score was −3 to 3. The lower the score was, the more closely the product was perceived to be associated with Bomy/Lin Feng Ying. The higher the score was, the more closely the product was perceived to be associated with Pringles/Lay's

\*  $p \leq .10$ , \*\*  $p \leq .05$ , \*\*\*  $p \leq .01$ , one-tailed

the scores between the two brand orders did not show significant differences in the simple expression, though the mean scores were still higher when brand B was the initial brand than when brand A was the initial brand. Because there were neither semantic clues nor other words in the expression to guide the participants' processing, they may have perceived both brands as having relatively equal responsibility for the product.

#### Integrating across the results

To estimate the strength of the initial position hypothesis relative to the responsibility scores, we conducted meta-analyses. We conducted homogeneity tests before aggregating the results to determine whether these results had the same underlying distribution (Rosenthal 1991). We then calculated the number of null results that must be in file drawers before

the overall probability of a Type I error can be reduced to  $p = .05$ . This number of filed studies, or the tolerance for future null results, is an indicator of whether such a tolerance level is small enough to threaten our overall conclusions.

*The absolute responsibility: the verb and the possessive expressions* Because of the similarity of the syntax structures in the verb and the possessive expressions, we aggregated the results of these two expressions. Overall, the following analyses contained 12 results (2 expressions  $\times$  3 studies  $\times$  2 brand orders).

#### (1) Overall Responsibility

We excluded two of the 12 results, including one in the opposite direction, in this analysis because the distribution underlying them differed significantly from the remaining results. The heterogeneity of the two results

**Table 4** Results of analyses for relative responsibility in Studies 2A, 2B, and 2C

	Study 2A		Study 2B		Study 2C	
	Brand A = Bomy		Brand A = Bomy		Brand A = Lin Feng Ying	
	Brand B = Pringles		Brand B = Lay's		Brand B = Pringles	
The verb expression	Brand A presents Brand B product vs. Brand B presents Brand A product					
Responsibility	<i>t</i> (112)	<i>r</i>	<i>t</i> (107)	<i>r</i>	<i>t</i> (59)	<i>r</i>
Overall	1.94**	.18	7.82***	.60	3.82***	.45
Marketing	4.86***	.42	7.37***	.58	5.53***	.58
The possessive expression	Brand A's brand B product vs. Brand B's brand A product					
Responsibility	<i>t</i> (111)	<i>r</i>	<i>t</i> (97)	<i>r</i>	<i>t</i> (58)	<i>r</i>
Overall	3.82***	.34	5.28***	.47	2.04**	.26
Marketing	4.37***	.38	4.00***	.38	4.73***	.52
The simple expression	Brand A brand B product vs. Brand B brand A product					
Responsibility	<i>t</i> (82)	<i>r</i>	<i>t</i> (85)	<i>r</i>	<i>t</i> (52)	<i>r</i>
Overall	0.50	.10	1.95**	.21	1.26	.19
Marketing	0.07	.01	0.32	.04	−0.34	.05

The range of the mean score was −3 to 3. The lower the score was, the more closely the product was perceived to be associated with Bomy/Lin Feng Ying. The higher the score was, the more closely the product was perceived to be associated with Pringles/Lay's

\*\*  $p \leq .10$ , \*\*  $p \leq .05$ , \*\*\*  $p \leq .01$ , one-tailed

may be due to participants' unequal perceptions of the marketing ability or likability of the partners in an alliance as mentioned previously. For example, when participants were exposed to the expression “Bomy presents Pringles assorted fruit cornflakes” in Study 2A, the overall responsibility score was slightly greater than zero, indicating that participants believed Pringles should be at least equally responsible for the co-branded product, even if Bomy was the initial brand.

The other case showing the interference of brand strength was the expression “Lay's presents Bomy assorted fruit cornflakes” in Study 2B. The overall responsibility score was the highest among all the results, with a relatively small standard deviation, indicating that most participants believed that Lay's in the initial position should be more responsible for the co-branded product. However, in the expression “Pringles presents Bomy assorted fruit cornflakes” of Study 2A this effect is not as strong as in the previous expression. This difference may be because at the time of the study, Lay's reputation and market share had been increasing in Taiwan. The distribution of the remaining ten results was homogeneous ( $\chi^2(9)=12.42$ ). Across the studies, the brand in the initial position was perceived as having more overall responsibility for the new product. An average effect size of  $r=.39$  is relatively strong. Furthermore, it would take a large number of null results (253) to mitigate this effect.

## (2) Marketing Responsibility

All the brand alliances in Studies 2A, 2B, and 2C consisted of an international brand and a national brand.

We split the 12 results into two groups: (1) the international brand in the initial position and (2) the national brand in the initial position. When the national brand was in the initial position, the distribution of the results was homogeneous ( $\chi^2(5)=1.54$ ), and the average effect size  $r$  of the six results was .16. It would take an additional 12 studies filed away to change the combined significant results to just significant at  $p=.05$ .

When the international brand was in the initial position, the distribution of the six results was homogeneous ( $\chi^2(5)=10.90$ ), and the average effect size  $r$  of these results was .74. Now it would take at least 549 unreported studies averaging null results to reduce these results to significance at  $p=.05$ . When the international brand was in the initial position, consumers perceived it as having more responsibility for marketing than the national partner in the alliance. However, when the national brand was in the initial position, the responsibility score shifted only slightly to the national brand. Consumers still believed the international and national brand should have almost equal marketing responsibility.

Then, we compared the two average effect sizes to determine whether there was a significant difference between the marketing responsibility scores when the international brand or the national brand was in the initial position. The difference between the marketing responsibility scores when the international and the national brand was in the initial position was significant ( $Z=9.32$ ,  $p<.01$ ). Compared with a weaker national initial brand, a strong international brand in the initial position was

perceived as having most responsibility for marketing the new product.

Regardless of whether the national or international brand was in the initial position, the initial brand was perceived as responsible for the marketing of the new product. This effect of  $r=.74$  for the international brand was quite large. When the national brand was in the initial position, the effect was smaller but still supportive of the thesis that the initial brand in a composite brand extension expression will be perceived as more responsible for marketing the new product.

*The relative responsibility: the verb and the possessive expressions* To further test the efficacy of the initial brand's superiority, we compared the effects for the same brand in the initial position with when it was the head brand. Six results (2 expressions  $\times$  3 studies) provide an opportunity to test the difference between these two brand orders for the verb and the possessive expressions.

#### (1) Overall Responsibility

Because of the heterogeneity between the two results (the verb and the possessive expressions in Study 2B) and others, we split the six results into two groups: (1) Study 2B: Bomy/Lay's and (2) Studies 2A and 2C: Bomy/Pringles and Lin Feng Ying/Pringles. As mentioned previously, participants favored Lay's more such that the influence of the initial brand was strengthened when Lay's was in the initial position. As a result, the  $t$ -values of these two results were larger than others. The distribution of these two results was homogeneous ( $Z(1)=1.30$ ), and the average effect size  $r$  was .54. It would take an additional 54 studies filed away to change the combined significant results to just significant at  $p=.05$ . Each brand in the alliance was perceived as having more responsibility when it was in the initial position than when it was the head brand.

Except for these two results, the distribution of the other four results was homogeneous ( $\chi^2(3)=3.91$ ). Across the results, the brand in the initial position was perceived as having more overall responsibility for the new product. The average effect size  $r$  was .30, and it would take 45 unreported studies averaging null results to mitigate this effect. The same pattern that a brand would be perceived as having more responsibility when it shifted from being the head brand to the initial position still held across these four results. As expected, the difference between the two effect sizes was significant ( $Z(1)=3.42, p<.01$ ).

#### (2) Marketing Responsibility

All six results support the initial position hypothesis and were homogeneous ( $\chi^2(5)=6.44$ ). The average effect size  $r$  was .47, and 323 unreported studies averaging

null results would bring the results to significance at  $p=.05$ . Again, when a brand was in the initial position of a composite brand extension expression, participants perceived it as having more responsibility for marketing the new product than when it was the head brand.

The strength of the initial brand and the head brand could be separated by using new expressions that differ from the expression in previous research. The meta-analyses for the verb and the possessive expressions showed the strong connection between the initial brand and the extension product. However, these two expressions were influenced by semantic meanings. The word "presents" or the possessive in the expression might have led consumers to process those expressions according to the meaning of the words and the syntax structure as well. Therefore, because the simple expression contained only two brands and the product without any other words or symbols, we examined the aggregate results of the tests for this expression.

*The absolute responsibility: the simple expression* Compared with the other expressions, participants' interpretation of the simple expression was more complicated. No clues were available for them to decide whether to combine the two brands first or to connect the later one with the product first. If they chose to combine the two brands first, the head brand did not exist in their minds. In Studies 2A and 2B, most participants combined the two brands first and paused between the later brand and the product because of the long product name. In Study 2C, most participants combined the head brand and the product first and paused between the two brands because the product name was shorter.

All the brand alliances in Studies 2A, 2B, and 2C consisted of an international brand and a national brand. The international brands in Studies 2A (Pringles) and 2B (Lay's) were perceived as stronger than the national brand (Bomy). In Study 2C however, the national brand (Lin Feng Ying) was perceived as stronger than the international brand (Pringles). Because of this heterogeneity between Study 2C and the other two studies, we included only Studies 2A and 2B in the following meta-analyses.

Another important issue is the homogeneity of the syntax structure in participants' minds. There were two reasonable possibilities in which the participants would choose to pause in the simple expression, so we analyzed those two groups separately. However, most participants paused between the later brand and the product in Studies 2A and 2B, which means a head brand did not exist in their minds. Thus, we excluded the few participants who paused between the two brands from the meta-analyses.

For the simple expression, each  $t$  test that tested the responsibility score against zero could be considered a single result.

Thus, we included four results (2 studies  $\times$  2 brand orders) in the meta-analyses.

#### (1) Overall Responsibility

All the brand alliances in these results consisted of one international brand and one national brand. Again, we split four results into two groups: (1) the international brand in the initial position and (2) the national brand in the initial position. When the initial brand was an international brand, the distribution of the results was homogeneous ( $Z(1)=1.56$ ), and the average effect size  $r$  was .44. In this situation, it would take ten unreported studies averaging null results to reduce the results to significance at  $p=.05$ . That is, when an international brand was in the initial position, consumers perceived it as having more overall responsibility than its national partner.

When the initial brand was a national brand, the distribution of these results was homogeneous ( $Z(1)=0.42$ ), and the average effect size  $r$  was  $-.25$ . If two additional studies averaging null results were filed away, the combined significant results would become just statistically significant at  $p=.05$ . Even when the national brand was in the initial position, the responsibility scores were still greater than zero (note the negative sign for  $r$ ). The participants still perceived the international brand as having more responsibility.

The difference between these two average effect sizes was significant ( $Z=4.43$ ,  $p<.01$ ). The perceived responsibility of the international brand was significantly more when it was in the initial position, though the brand was still perceived as having more responsibility than the national brand for the new product even if it was not the initial brand.

#### (2) Marketing Responsibility

The four results were significantly heterogeneous ( $\chi^2(3)=49.07$ ). Thus, we could not aggregate the results of the  $t$  tests. However, all the single  $t$ -test results showed that regardless of whether the international or the national brand was in the initial position, the responsibility scores were all greater than zero. This result indicates that the international brand was always perceived as having more responsibility than its national partner.

### Study 3 in the United States

The main question of the current research came from the suspicion that the head brand of the composite brand expression (i.e., “Slim-Fast chocolate cakemix by Godiva”, “the by expression” in the current research) in the previous research was also in the initial position. In Studies 1, 2A, 2B, and 2C, we used three new expressions in Chinese that separate the

effect of the head brand and the initial brand. As described above the effect of the initial brand was demonstrated. However, the by expression was not included in the four studies because the structure of this expression is very unusual in Chinese. Therefore, it is necessary to test the hypotheses in English. If the finding of the experiment using English is consistent with that using Chinese, then the different results between the previous and the current research cannot be attributed to the differences of languages or cultures. Furthermore, by doing so the generalizability of the findings could also be enhanced.

#### Stimuli creation and procedure

Study 3 was conducted using an on-line questionnaire in English in the United States. The participants in this study were panel members from an on-line survey company. Through pretests, puff pastry by Tropicana and Pringles were selected as the extension product and the brands in the composite brand extension (familiarity: Tropicana=5.57, Pringles=5.90,  $t(29)=1.54$ ; likability: Tropicana=5.37, Pringles=5.53,  $t(29)=0.55$ ; extendibility: Tropicana=1.97, Pringles=2.00,  $t(29)=0.18$ ; all  $ps>.10$ ). The associations of Pringles were crunchy, tasty, and salty; while Tropicana was perceived to be fresh, nutritious, and tangy.

To test the hypotheses, the by expression from previous research, the possessive and the simple expressions used in the current research were adopted. Also, another common expression “Tropicana-Pringles puff pastry” (“the hyphen expression”) was used. Among these four expressions, the by expression is the only one that the head brand is in the initial position of the expression. Similar with the procedures of the studies in Taiwan, the order of Tropicana and Pringles in the four expressions was reversed for the other treatments. The participants were randomly assigned to one of the eight groups (see Table 1).

After filtering out those who are not native English speakers, 319 participants were included in the analyses (193 males and 126 females; average age 21.86 years old). First the participants were exposed to one of the composite brand extension expressions and asked to choose a pause point. Then they evaluated the association between the product and each brand in the alliance, the ownership of the co-branded product, overall and marketing responsibility of the two brands in the alliance using seven-point scales. Finally, they rated the familiarity, likability, and extendibility of Tropicana and Pringles.

To further investigate the perceived responsibility when the co-branded product fails, a scenario about one consumer’s unpleasant experience trying the new product was presented (see Appendix). After reading the scenario, participants were told that the unhappy consumer is going to complain. Using seven-point scales ( $-3$  = Tropicana,  $3$  = Pringles), the



participants had to evaluate which company they think this consumer would be more likely to call and which brand's own product in the future would this consumer decide not to buy.

## Results and analyses

*The language structure* As Table 2 shows, over 90% of the participants who saw the by expression initially combined the product and the initial brand, which is the head brand as well. That means the structure of this expression in their minds matched the theory and was quite consistent among all participants. For the possessive expression, the head brand still existed in more than half of the participants' minds. Others chose to combine two brands at the beginning of the process.

As mentioned previously, there would be two reasonable composite concept formation processes for the simple expression since there is no clue to indicate which two of the three components (i.e., the two brands and one product) should be combined first. The results of the simple expression show that about half of the participants connected the two brands first, and the others combined the head brand and the product initially. In comparison to the results of the studies in Taiwan, this distribution shows that both formation processes were adopted evenly by the participants, which fits the prediction of the current research.

For the hyphen expression, the hyphen between Tropicana and Pringles provides a clue that these two brands should be connected first. Therefore, there should not be a head brand in consumers' minds since the product would not be connected with any brands initially. More than 60% of the participants combined the two brands first when seeing this expression; the others paused between the two brands. In the latter situation, the head brand still existed in these participants' minds because it was connected with the product initially.

*Association between each brand and the extension product* The two indicators of associations in Study 3 were analyzed separately because the correlation was only .35, though significant. If the association scores were negative, the more the product was perceived to be associated with or belong to Tropicana. However, if the scores were positive, the more the product was perceived to be associated with or belong to Pringles.

Table 5 presents the results of t tests comparing the scores against zero (i.e., absolute association) and between two brand orders (i.e., relative association). Overall, the results of three expressions comparing the scores against zero support H2a. In the possessive expression, both the association and ownership scores were significantly lower than zero when Tropicana was the

initial brand, but higher than zero when Pringles was the initial brand. That means the initial brand was perceived to own and be more closely associated with the co-branded product. The same pattern was also found in the hyphen expression. For the simple expression, only the ownership scores revealed the effect of the initial brand. The association scores did not significantly differ from zero.

Interestingly, the results of the by expression differed from other expressions and were also inconsistent with both hypotheses as well. The ownership score was significantly higher than zero when Tropicana was the head brand in the initial position, but lower than zero when these two brands exchanged their positions. That means the participants considered that the product belongs to the modifier brand even if it was not in the initial position of the expression. The association scores of both brand orders favored Pringles, but were not significant when Tropicana was the head brand in the initial position.

Combining the six homogeneous results ( $\chi^2(5)=5.82$ ) of the association score for the possessive, the simple, and the hyphen expressions, the average effect size  $r$  was .22. It would take 22 unreported studies averaging null results to reduce these results to significance at  $p=.05$ . Due to the heterogeneity among the six results of the ownership score for these three expressions, these results were split into two groups according to the initial brand. When Tropicana was the initial brand ( $\chi^2(2)=3.81$ ), the average effect size  $r$  was .29. It would take an additional ten studies filed away to change the combined significant results to be just significant at  $p=.05$ . When Pringles was the initial brand ( $\chi^2(2)=5.26$ ), the average effect size  $r$  was .52. Now it would take an additional 44 studies filed away to change the combined results to be just significant at  $p=.05$ . The integrated results of the three expressions show that the product was generally perceived to be more closely associated with and belong to the initial brand. This effect was stronger when Pringles was the initial brand than when Tropicana was the initial brand ( $Z=2.11$ ,  $p=.02$ ).

Further t tests were conducted to compare the scores between two brand orders (i.e., relative association). If the perceived association/ownership scores in two brand orders were significantly different, the scores shifted when Tropicana and Pringles exchanged their positions in the expression. Except for the association scores of the simple expression, all the association and ownership scores of the possessive, the hyphen, and the simple expressions differed significantly when Tropicana and Pringles exchanged positions. When Pringles was the initial brand, the scores were significantly higher than when Tropicana was the initial brand. The co-branded product was

**Table 5** The association and ownership between each brand and the product in Study 3

Expression	Variable	Absolute			Absolute			Relative (Compare two orders)	
		Initial Brand = Tropicana (Comparing against zero)			Initial Brand = Pringles (Comparing against zero)				
		<i>M</i> ( <i>SD</i> )	<i>t</i> ( <i>df</i> )	<i>r</i>	<i>M</i> ( <i>SD</i> )	<i>t</i> ( <i>df</i> )	<i>r</i>	<i>t</i> ( <i>df</i> )	<i>r</i>
By	Association	0.19(2.07)	0.56 (35)	.09	0.68(2.01)	2.04 (36)**	.32	1.01 (71)	.12
	Ownership	0.97(1.66)	3.50 (35)***	.51	−0.62(2.09)	−1.81 (36)**	.29	−3.60 (71)***	.39
Possessive	Association	−0.72(1.80)	−2.41 (35)**	.38	0.59(1.72)	2.10 (36)**	.33	3.19 (71)***	.35
	Ownership	−1.08(1.76)	−3.69 (35)***	.53	1.32(1.36)	5.94 (36)***	.70	6.55 (71)***	.61
Simple	Association	−0.18(1.90)	−0.64 (43)	.10	−0.09(1.86)	−0.33 (42)	.05	0.22 (85)	.02
	Ownership	−0.34(1.67)	−1.35 (43)*	.20	0.88(1.47)	3.95 (42)***	.52	3.63 (85)***	.37
Hyphen	Association	−0.53(1.49)	−2.36 (42)**	.34	0.44(1.88)	1.54 (42)*	.23	2.67 (84)***	.28
	Ownership	−0.26(1.50)	−1.12 (42)	.17	0.53(1.59)	2.20 (42)**	.32	2.37 (84)**	.25

The range of the mean score was −3 to 3. The lower the score was, the more closely the product was perceived to be associated with Tropicana. The higher the score was, the more closely the product was perceived to be associated with Pringles

\*\*  $p \leq .10$ , \*  $p \leq .05$ , \*\*\*  $p \leq .01$ , one-tailed

perceived as more closely associated with and belonging to one brand when this brand was in the initial position in comparison to when it was the head brand for these expressions. For the by expression, only the ownership scores revealed a significant difference between two brand orders. The participants perceived that the modifier brand, which is accompanied with “by” and was not in the initial brand, owns the product.

Combining the three homogeneous results ( $\chi^2 (2) = 5.21$ ) of the association score for the three expressions, the average effect size  $r$  was .22. It would take ten unreported studies averaging null results to bring these results to significance at  $p = .05$ . Due to the heterogeneity of the result of the possessive expression, only the results of the simple and the hyphen expressions were integrated ( $Z (1) = 0.86$ ) for the ownership score. The average effect size  $r$  of these two expressions was .31. It would take at least 11 studies filed away to change the combined significant results to just significant at  $p = .05$ .

**Perceived responsibility** Table 6 presents the  $t$  tests comparing the responsibility scores against zero (i.e., absolute responsibility) and between two brand orders (i.e., relative responsibility). If the scores were lower than zero, the participants considered Tropicana to be more responsible for the co-branded product. On the other hand, if the scores were higher than zero, Pringles was perceived to have more responsibility for the product.

For the simple and the hyphen expressions, most of the scores were significantly higher than zero when Pringles was the initial brand. But the scores were still positive when Tropicana was the initial brand. Combining the six

homogeneous results ( $\chi^2 (5) = 8.88$ ) of the marketing responsibility in the possessive, the simple, and the hyphen expressions, the average effect size  $r$  was .22. It would take 21 unreported studies averaging null results to bring these results to significance at  $p = .05$ . Thus, the results of the marketing responsibility in these three expressions support H2b. However, for the by expression an opposite pattern showed again. The modifier brand, which was not in the initial position of the expression, was perceived to be more responsible for the product.

Further  $t$  tests were conducted to compare the responsibility scores between two brand orders in an expression (i.e., relative responsibility). If the score when Pringles is the initial brand is significantly higher than when Tropicana is the initial brand, then the initial brand is perceived to have more responsibility for the product. That is, when one brand's location in an expression is changed from the initial position to the other position, the perceived responsibility would shift to its partner brand.

Generally, the results of the possessive, the simple, and the hyphen expressions support H2b, the initial position hypothesis. Both overall and marketing responsibility scores of the possessive expression were significantly higher when Pringles was the initial brand than when Tropicana was in the initial position. For the simple expression, only overall responsibility scores showed a significant difference when the brand order shifted, but the same pattern could be found in the mean scores of marketing responsibility. The scores between two brand orders did not show significant differences in the hyphen expression, though the mean scores were still higher when Pringles was the initial brand than when Tropicana was in

**Table 6** Results of analyses for responsibility in Study 3

Expression	Variable	Absolute responsibility Initial Brand = Tropicana (Comparing against zero)			Absolute responsibility Initial Brand = Pringles (Comparing against zero)			Relative responsibility (Compare two orders)	
		<i>M (SD)</i>	<i>t(df)</i>	<i>r</i>	<i>M (SD)</i>	<i>t(df)</i>	<i>r</i>	<i>t(df)</i>	<i>r</i>
By	Overall	0.64(1.22)	3.14 (35)***	.47	−0.73(1.33)	−3.35 (36)***	.49	−4.58 (71)***	.48
	Marketing	0.42(1.30)	1.93 (35)**	.31	−0.14(1.46)	−0.56 (36)	.09	−1.71 (71)**	.20
Possessive	Overall	−0.50(1.23)	−2.44 (35)**	.38	0.51(1.07)	2.92 (36)***	.44	3.76 (71)***	.41
	Marketing	−0.53(1.23)	−2.57 (35)***	.40	0.35 (.86)	2.49 (36)**	.38	3.55 (71)**	.39
Simple	Overall	0.02(1.05)	0.14 (43)	.02	0.51(1.10)	3.05 (42)***	.43	2.13 (85)**	.23
	Marketing	0.05(1.10)	0.27 (43)	.04	0.47(1.24)	2.46 (42)**	.35	1.67 (85)	.18
Hyphen	Overall	0.12(1.18)	0.65 (42)	.10	0.16(1.40)	0.76 (42)	.12	0.17 (84)	.02
	Marketing	0.05(1.31)	0.23 (42)	.04	0.35(1.29)	1.77 (42)**	.26	1.08 (84)	.12
Expression	Variable	Comparison against zero Initial Brand = Tropicana			Comparison against zero Initial Brand = Pringles			Comparison between two brand orders	
		<i>M (SD)</i> <sup>c</sup>	<i>t(df)</i>	<i>r</i>	<i>M (SD)</i>	<i>t(df)</i>	<i>r</i>	<i>t(df)</i>	<i>r</i>
By	Complaint	1.14(1.50)	4.57 (35)***	.61	−0.30(1.84)	−0.98 (36)	.16	−3.65 (71)***	.40
	Re-purchase	0.75(1.08)	4.17 (35)***	.58	0.22(1.62)	0.81 (36)	.13	−1.65 (71)*	.19
Possessive	Complaint	−0.67(1.87)	−2.14 (35)**	.34	1.46(1.30)	6.81 (36)***	.75	5.65 (71)***	.56
	Re-purchase	−0.11(1.69)	−0.40 (35)	.07	0.78(1.06)	4.51 (36)***	.60	2.72 (71)***	.31
Simple	Complaint	−0.23(1.49)	−1.01 (43)	.15	0.79(1.30)	3.98 (42)***	.52	3.39 (85)***	.35
	Re-purchase	0.09(1.49)	0.40 (43)	.06	0.81(1.30)	4.12 (42)***	.54	2.41 (85)***	.25
Hyphen	Complaint	−0.21(1.73)	−0.80 (42)	.12	0.58(1.37)	2.79 (42)***	.40	2.36 (84)**	.25
	Re-purchase	0.02(1.61)	0.09 (42)	.01	0.65(1.31)	3.27 (42)***	.45	1.98 (84)**	.21

The range of the mean score was −3 to 3. The lower the score was, the more responsibility Tropicana was perceived to have for the product. The higher the score was, the more responsibility Pringles was perceived to have for the product

\*  $p \leq .10$ , \*\*  $p \leq .05$ , \*\*\*  $p \leq .01$ , one-tailed

the initial position. Combining the three homogeneous results ( $\chi^2(2) = 3.50$ ) of the possessive, the simple, and the hyphen expressions, the average effect size  $r$  of marketing responsibility was .23. It would take 12 additional null results to bring these results to significance at  $p = .05$ .

As for the by expression, both overall and marketing responsibility scores were significantly higher when Tropicana was the initial brand than when Pringles was in the initial position. That means the modifier brand in the by expression was perceived to have more responsibilities for the product. This finding is consistent with the results of the association score, but supports neither the prediction of the head brand's strength nor the expectation of the initial brand's effect.

**Further investigation of the perceived responsibility** In Study 3, we presented a scenario to further explore the perceived responsibility in consumers' minds after knowing the co-branded product fails. The participants were asked to indicate (1) to which company will the consumer in the scenario call to complain; and (2) which brand's product will the consumer in the scenario never purchase again in

the future. Table 6 presents the results of  $t$  tests comparing the scores of these two items against zero and between two brand orders. If the scores were lower than zero, Tropicana was more likely to be blamed for the failure of the co-branded product. On the other hand, if the scores were higher than zero, Pringles was more likely to be blamed for the performance of the product.

The results of  $t$  tests comparing the scores against zero for the possessive, the simple, and the hyphen expressions show that the scores were all significantly higher than zero when Pringles was the initial brand. However, only one score was significantly lower than zero when Tropicana was the initial brand. That is, the participants tended to blame Pringles for the failure of the co-branded product no matter which brand was in the initial position. The manipulation check shows that the attribution of the failure did not come from the likability or extendibility of the two brands (likability: Tropicana = 5.58, Pringles = 5.53,  $t(318) = 0.62$ ,  $p = .53$ ; extendibility: Tropicana = 3.67, Pringles = 3.47,  $t(318) = 1.37$ ,  $p = .17$ ). The more perceived responsibility of Pringles might be due to its slightly higher marketing

ability in comparison to Tropicana ( $Tropicana=5.04$ ;  $Pringles=5.26$ ,  $t(318)=3.27$ ,  $p<.01$ ). A stronger brand might be considered to do more for the product since its marketing capability is higher than its partner. As mentioned previously, it is reasonable for consumers to combine the two brands first when processing the simple and the hyphen expressions. Thus, the effect of the initial position might be weaker and the results might be biased by other factors, such as marketing ability, more easily. For the by expression, the participants blamed the modifier brand Pringles for the failure of the product when Tropicana was the head brand in the initial position. When the brand order reversed, the scores were not significantly different from zero.

An additional analysis of combining the above results of the complaint score for the possessive, the simple, and the hyphen expressions was conducted. Due to the heterogeneity between one result (Pringles' Tropicana puff pastry) and others, this result was excluded from the integration. The average effect size  $r$  of the other five results ( $\chi^2(4)=5.85$ ) was .31. It would take an additional 35 studies filed away to change the combined significant results to just significant at  $p=.05$ . Overall, the results of the possessive, the simple, and the hyphen expressions still support H2b that the initial brand will be perceived to be more responsible for the co-branded product.

Comparing the two brand orders, there is a consistent and significant pattern among the three expressions. The participants blamed the brand more when it was in the initial position than when it was the head brand. However, in the by expression a brand would be blamed more for the failure of the co-branded product when it was the modifier brand, which was not in the initial position as well, than when it was the head brand in the initial position.

Combining the above results of the possessive, the simple, and the hyphen expressions, the stronger effect of the initial brand showed on both variables. For the complaint score, the average effect size  $r$  of the three results ( $\chi^2(2)=5.64$ ) was .39. It would take an additional 43 studies filed away to change the combined significant results to just significant at  $p=.05$ . For the re-purchase score, the average effect size  $r$  of the three results ( $\chi^2(2)=0.46$ ) was .25. It would take an additional 16 studies filed away to change the combined significant results to just significant at  $p=.05$ .

## Discussion and contributions

When two brands ally to introduce a new product, it is in both brands' interests to communicate this alliance and the new product to consumers successfully. One aspect of such a

marketing strategy is to develop an expression for the composite brand to help consumers form a new concept of the alliance and product. To extend previous research on composite brand extension, we used new expressions to estimate the relative strengths of two brands located in different positions—the head brand or the initial brand—in these expressions. Four studies in Chinese and one study in English were conducted in Taiwan and the United States, respectively, to examine the competing hypotheses.

Although our experiments were extended from some pilot studies by previous researchers, the purpose of the current research is neither replicating previous ones nor integrating the various factors in different models. What we've done is specifying the difference between some confusing branding terms, examining and setting up a boundary of the theory applicability, and providing a different perspective to interpret how consumers process this particular case of alliance—composite brand extension.

Specifically, although in most circumstances the ingredient brand usually appears in a corner of the product package or stand out from the main brand zone instead of directly attaching to the host brand, some ingredient branding products are also named a composite brand expression. Even if the two brands do cooperate with each other in the process of the product development and use a composite brand name, some consumers might still perceive one brand as an ingredient provider (e.g. the brand "Godiva" in the expression "Godiva cakemix by Slim-Fast"). Thus, the perceived host brand takes most of the responsibility no matter where the two brands are positioned, and the linguistic theory becomes a minor issue. To avoid this interference, the equivalence of both brands' extendibility to the extended product is one of the most important criteria when choosing brands for the pure composite branding alliance of this research. Based on categorization theory, the classification scheme permits us to make judgments of the fit between the new extension product and the original products of a brand (Chakravarti et al. 1990; Park et al. 1991). How consumers perceive a composite brand extension will be affected by their judgment of the fit between the product and the two brands. Thus, selecting two brands with equal extendibility to the extension product also reduced the influence of fit between the product and the two brands on the results.

Additionally, in some circumstances when consumers are not familiar with one or both brands in a composite brand extension expression, it is possible that they might take one of them as a sub-brand and the other as a parent brand. Again in this situation the linguistic theory plays a minor role for interpreting consumers' perception since one brand is perceived to be a member of the other. Therefore, to make sure that the participants know the

two existing brands in the experiments well, we chose two brands with at least moderate and equal familiarity and likability as the stimuli.

### Theoretical contributions

According to the nested composite concept formation process, previous researchers argue that consumers perceive the head brand in a composite brand expression as more closely associated with the product. However, the head brand in the expression “Slim-Fast chocolate cakemix by Godiva” (i.e., the by expression of the current research) used in previous research was also in the initial position of the phrase. To clarify the effect of a brand as the initial brand or the head brand, we used several new expressions in both Chinese and English to separate the strength of the head brand from the initial brand. In line with linguistic theories, the head brand and the initial brand will both influence consumers’ perceptions of the extension product. Therefore, using strong inference, we created a competition between the head brand hypotheses and the initial brand hypotheses among these expressions.

Drawing from linguistic theory, we argued that the head brand should be assigned according to the language structure of the expression rather than consumers’ perceptions of association between the product and each brand. In this way, the effect of the head brand could be clarified without any confounding of other factors, such as brand familiarity, likability, or extendibility. Moreover, we used a pause-point question in the experiments as a proxy of the language structure in consumers’ minds. This underlying language structure could be determined and the existence of the head brand could be demonstrated by where these consumers paused when reading the composite brand expression.

We found that there is a common language structure that helped consumers interpret the composite brand concept when they were exposed to the by, the verb and the possessive expressions. The head brand does exist in their minds. The hyphen in the hyphen expression is an indicator that suggests consumers to connect the two brands initially. However, in Study 3 some participants still combined the head brand and the product initially when they were exposed to the hyphen expression, though more than a half of them followed the indication of the hyphen and connected the two brands first.

The simple expression is relatively “clean” in the syntax structure because there are no clues for consumers to decide how to begin the combining process. The composite concept of this expression can be formed in two possible ways: (1) to combine two brands first or (2) to connect the head brand and the product first. If consumers choose to combine two brands first, the brands in an alliance will be considered more equal for the co-branded product. An important determinant of how consumers begin the combining process is the length of the

product name. When the product name per se is long, they will tend to combine the two brands first and the head brand will not exist. When the product name is short, the possibility of combining the head brand and the product will increase.

Primacy effect might be another possible explanation for the effect of the initial brand. Asch (1946) introduced an impression formation task and found that early information seems to have a greater effect on the response, creating a primacy effect. Anderson (1974) proposed the information integration theory and explained that the earlier information counts more because people attend less to each subsequent piece of information. However, in previous research of primacy effect there were several adjectives or sentences describing one subject. Those stimuli (i.e., adjectives or sentences) were not coherent in one sentence or article. There were not logical connections between each other in their studies. In the current research, there were only three objects (i.e., the two brands and extension product) which semantically connected in one phrase and simultaneously appeared in front of the participants. Thus, consumers should focus on the relation between each object to comprehend the whole phrase instead of processing each object separately in this composite brand extension context. The mechanism of Anderson’s information integration theory might not be appropriate to interpret composite concepts.

Klatzky (1975) also proposed that in free recall the serial position effect is usually in the form of a bow-shaped curve. There are both primacy effect and recency effect, which means the first as well as the last items are weighted more heavily than the middle ones. In the current research, the same expression was mentioned in every phase during the experiments. Participants were not asked to recall the information of the composite brand extension. Therefore the free-recall paradigm in memory research might also not be the best theory to investigate consumers’ perceptions toward composite brand extension concepts.

### Substantive contributions

Previous research suggested that how consumers perceived the expression of a composite brand extension helps them associate the co-branded product with both brands and assign responsibility or ownership for the product (Jones 2004; Park et al. 1996). Those researchers also concluded that the head brand is more closely associated with the new product. However, in their expression “Slim-Fast chocolate cakemix by Godiva,” the head brand is also the initial brand in the expression. Drawing from a syntax rule of linguistics, we provide an alternative explanation for the strong association between one brand and the extension product in a composite brand expression. That is, the word order in the expression influences consumers’ perceptions of the alliance, and the



initial brand exhibits more strength than its partner. By using different expressions in both Chinese and English, we examined the strength of the head brand and the initial brand separately. Generalizability is enhanced by testing the hypotheses in different languages as well as using students and panel participants, and the universal linguistic principle in the brand alliance context could be shown in two different cultures.

We found that rather than the head brand in the expression, it is the brand in the initial position that is accorded this association and is perceived as more responsible for the product and its marketing. That is, according to the syntax rule, consumers may have some beliefs about the brand in the initial position of a composite brand expression. Indeed, across five studies and multiple expressions of composite brand extensions, we confirmed this argument. The influence of the head brand may still exist, but it will be diluted by the initial brand when the head brand and the initial brand are not the same.

The semantic meaning in the verb and the possessive expressions strengthens the connection between the initial brand and the product. For example, the expression “Bomy’s Pringles assorted fruit cornflakes” may indicate the ownership of the product by the possessive in the expression. For the simple and the hyphen expression, the perceived responsibility of both brands in a composite brand alliance tends to be more equal than in the other expressions because of the lack of semantic clues. However, the perceived association between each brand and the extension product still exhibits the strength of the initial brand. The influence of the co-branded product failure is also greater for the initial brand than the head brand.

The *by* expression adopted from the previous research is the only one that the head brand also stands in the initial position. The surprising results of the *by* expression support neither the hypotheses of the initial brand nor the prediction of the head brand. Although more than 90% of the participants connected the head brand and the product first, the head brand in the initial position does not reveal any effects predicted in the current research. On the contrary, the modifier brand accompanied with “*by*” is perceived to own the product and have more responsibilities for the product. When the product fails to satisfy customers, those upset customers would be more likely to call the modifier brand to complain! The reason might be that the word “*by*” brings a semantic meaning indicating that the modifier brand’s unique position in the alliance overrides the dual effect of the head brand in the initial position of this expression. However, the stalemate between the head brand in the initial position and the modifier brand

accompanied with “*by*” could be observed in the results of ownership and association scores. When thinking of ownership, participants tends to consider the modifier brand accompanied with “*by*” to own the co-branded product. The association score does not seem to show a clear pattern.

In Study 3, we use a scenario to investigate consumer’s perceived responsibility when learning the failure of the co-branded product. Compared to the re-purchase score, the complaint score reveals a more obvious pattern for the initial brand. That is, the failure of the co-branded product does not necessarily restrain consumers’ purchase intention toward the initial brand’s own product, though the initial brand would more likely need to handle the complaints from dissatisfied customers in comparison to the other brand.

The complaint is an immediate outcome caused by the present co-branded product, but the restraint on the purchase intention of the two brands’ own products is a long-term influence, which is similar to the feedback effect in co-branding literature (e.g., Geylani et al. 2008; Simonin and Ruth 1998; Washburn et al. 2004). Although there is no denying that the negative feedback effect on the two brands from the failure of the co-branded product possibly occurs, the decision of not purchasing the products of an existing brand might be based on an attitude change. This change is more difficult to be manipulated by a single piece of information. Thus, the result of the re-purchase score is more likely influenced by the attributes of the brands in the alliance.

In Taiwan we found different results depending on whether a stronger international brand or a weaker national brand is in the initial position. No matter which brand is in the initial position, consumers perceives the stronger brand as having more responsibility when it is paired with a weaker brand. When the strengths of both international and national brand are more equal (i.e., Lin Feng Ying and Pringles in Study 2C; Tropicana and Pringles in Study 3), the influence of the initial brand still occurs. The results of Study 3 in the United States also show that Pringles is perceived to have more responsibility for the co-branded product and receives a stronger negative influence caused by the failure of the co-branded product than Tropicana no matter which brand stands in the initial position. The more perceived responsibility of Pringles might be due to its slightly higher marketing ability in comparison to Tropicana. Consumers might consider that a stronger brand should do more for the product since its marketing capability is higher than its partner.

Though the results of the studies in Chinese and English show some differences due to the nature and the usage of the two languages, some linguistic principles mentioned in this research are still universal. Based

on linguistic theories, the hierarchical structure and the word order both play important roles when consumers form their perceptions of a composite branded product according to the expression. In this research we found the word order seems to have greater influences on the composite brand situation without the interference of word meaning for both languages. The generalizability of the theories is demonstrated via two languages in two countries.

### Managerial implications

Several alternative expressions can be used for two brands in a composite brand alliance to directly communicate the alliance and the co-branded product to consumers. In general, if the simple and the hyphen expressions are adopted, the two brands in the composite brand alliance will be perceived as having more equivalent responsibility for the co-branded product than the other expressions in our experiments. If one of the brands wants to show its involvement and association with the co-branded product, being the initial brand of a composite brand expression would be a way to create a more involved image. However, this conclusion does not hold for the by expression.

When an international brand enters an unfamiliar market, choosing a local partner is a possible strategy. Consumers may perceive an international brand as stronger and better in marketing a new product than a local brand. For a stronger brand, adopting the verb or the possessive expressions and being the initial brand, or being the modifier brand in the by expression, could create a perception that it is more responsible for the co-branded product. If the stronger brand does not wish to take an important role in the alliance, it should not adopt the simple or the hyphen expression. If the product fails, it may suffer more damage regardless of which brand is in the initial position. Rather, the best way for a weaker brand to benefit more from a successful alliance is to be the initial brand in the verb or the possessive expressions, or be the modifier brand in the by expression. By doing this, the weaker brand can create a more involved image in the alliance. Although the international brand will be perceived to be more responsible for the product, the results of the relative responsibility still support one of the competing arguments. That means the location of the two brands in an expression, in addition to the international/local brand issue, is a key determinant to form consumers' perceptions of the composite brand extension.

According to the findings of the current research, it might not always be a good idea to find a partner brand that represents good values or has some favorable characteristics that are complementary to your own brand. Take the alliance in Study 3 for example, Tropicana should be a perfect partner for Pringles to ally with because Tropicana can carry over some positive attributes such as healthy or nutritious to the co-

branded product, and diminish the health concern caused by Pringles' current products. Pringles is still a popular brand to young people, which are our main target participants, and both brands are as favorable and familiar as each other. However, once the performance of the co-branded product is not as good as expected, there will be an increased possibility that consumers will attribute this negative outcome to Pringles, since the brand implies some attributes that are not completely positive.

### Limitations and future research

Beyond the challenge of selecting two real brands with stable and equal familiarity, likability, extendibility, and marketing ability, one limitation of this research is the difficulty in creating the by expression, which is a common composite brand expression in English, in Chinese. Nevertheless, this expression was included in Study 3 in English and the results can be compared with previous research.

How consumers processing things is always a mystery that researchers try to discover. The pause point question is an attempt to illustrate the language structure in consumers' minds. It provides researchers a way to understand consumers, though it is still an imperfect proxy. It is a challenge for researchers to find out other new and creative proxies in the future.

Using both Chinese and English languages to examine the theories, the universal linguistic principle in the brand alliance context is shown. Furthermore, several expressions and brand alliances are used in the five experiments of the current research. Unlike the student participants in four of these studies, we use panel subjects in the last study. Generalizability of our findings could be improved by replicating the studies in different languages and contexts, as well as using varieties of stimuli and participants.

The linguistic view of composite brand expression is an important, but not the only way to explain how consumers form perceptions of the composite brand alliance and the new product. The word color, layout, size or style of each brand, and extension product in the composite brand expression used on the product package or in advertisements are also important factors influencing consumers' interpretation of the alliance. Further, the interaction between the syntax of an expression and other factors, such as the fit, the likability, or the brand extendibility, is worth to be discovered in the future. The composite brand strategy has become increasingly popular, and thus investigating how consumers process the composite brand information can provide practical contributions and help partners in brand alliances find proper ways to communicate with their consumers.

## Appendix: the measurement of the pause point and the product failure scenario

*Pause Point.* If a pause is required when you read the expression “Lin Feng Ying Pringles Cup Soup” aloud, where will be the most possible pause point? Please check your pause point in the following expression. Please only choose ONE place to pause.

Lin Feng Ying \_\_\_\_\_ Pringles \_\_\_\_\_ Cup \_\_\_\_\_ Soup

*The Scenario of the co-branded product failure.* Mr. Smith bought this new product “Tropicana Pringles Puff Pastry” last week. He had never seen this new product before. Recently, he tried “Tropicana Pringles Puff Pastry” while watching a baseball game on TV at home. “Oh! It tastes awful!” he thought after biting off a big piece of the product. He felt so upset that he decided to make a call to complain about it.

- (1) According to the description of Mr. Smith’s experience when trying the new product “Tropicana Pringles Puff Pastry” above, which company do you think Mr. Smith would call to complain?

Definitely Tropicana    ☐ ☐ ☐ ☐ ☐ ☐ ☐    Definitely Pringles

- (2) Mr. Smith thought “I’ll never buy any products of \_\_\_\_\_ again!”  
Which brand is more likely in the blank?

Definitely Tropicana    ☐ ☐ ☐ ☐ ☐ ☐ ☐    Definitely Pringles

## References

- Aaker, D. A. (2004). Leveraging the corporate brand. *California Management Review*, 46(3), 6–18.
- Anderson, N. H. (1974). Information integration theory: A brief survey. In D. H. Hrantz, R. C. Atkinson, R. D. Luce, & P. Suppes (Eds.), *Contemporary developments in mathematical psychology Vol. 2* (pp. 236–305). San Francisco: Freeman.
- Asch, S. E. (1946). Forming impressions of personality. *Journal of Abnormal and Social Psychology*, 41(3), 258–290.
- Brachman, R. J. (1979). On the epistemological status of semantic networks. In N. V. Findler (Ed.), *Associative networks: Representation and use of knowledge by computers* (pp. 3–50). New York: Academic.
- Carnie, A. (2002). *Syntax: A generative introduction*. Oxford: Blackwell Publishing.
- Chakravarti, D., MacInnis, D. J., & Nakamoto, K. (1990). Product category perception, elaborative processing and brand name extension strategies. In M. E. Goldberg, G. Gorn, & R. W. Pollay (Eds.), *Advances in consumer research Vol. 17* (pp. 910–916). Provo: Association for Consumer Research.
- Chao, Y.-R. (1968). *A grammar of spoken Chinese*. Berkeley and Los Angeles: University of California Press.
- Connolly, J. H. (1991). *Constituent order in functional grammar: Synchronic and diachronic perspectives*. New York: Foris Publications.
- Crompton, P. (2006). The effect of position on the discourse scope of adverbials. *Text & Talk*, 26(3), 245–279.
- Desai, K. K., & Keller, K. L. (2002). The effects of ingredient branding strategies on host brand extendibility. *Journal of Marketing*, 66(1), 73–93.
- Esch, F. R., Schmitt, B. H., Redler, J., & Langner, T. (2009). The brand anchoring effect: a judgment bias resulting from brand awareness and temporary accessibility. *Psychology & Marketing*, 26(4), 383–396.
- Finin, T. W. (1980). The semantic interpretation of nominal compounds. *Proceedings of the First Annual National Conference on Artificial Intelligence* (pp. 310–312). Menlo Park, CA: Association for the Advancement of Artificial Intelligence.
- Fries, P. H. (1995). Patterns of information in initial position in English. In P. H. Fries & M. Gregory (Eds.), *Discourse in society: Systemic functional perspectives. Meaning and choice in language: Studies for Michael Halliday* (pp. 47–66). Norwood: Alex.
- Geylani, T., Inman, J. J., & Hofsted, F. T. (2008). Image reinforcement or impairment: the effects of co-branding on attribute uncertainty. *Marketing Science*, 27(4), 730–744.

- Grimes, J. E. (1986). Introduction. In J. E. Grimes (Ed.), *Sentence initial devices* (pp. 1–3). Dallas: Summer Institution of Linguistics.
- Her, O.-S. (1991). Topic as a grammatical function in Chinese. *Lingua*, 84(1), 1–23.
- Hetzron, R. (1978). On the relative ordering of adjectives. In H. Seiler (Ed.), *Language universal* (pp. 165–184). Tübingen: Narr Francke Attempto Verlag GmbH & Co. KG.
- Jo, M.-S. (2007). Should a quality sub-brand be located before or after the parent brand? An application of composite concept theory. *Journal of the Academy of Marketing Science*, 35(2), 184–196.
- Jones, S. A. (2004). *Whose cobrand is it anyway? Exploring consumer interpretations of a brand alliance*. (Unpublished doctoral dissertation). University of Oregon, Oregon.
- Klatzky, R. L. (1975). *Human memory: Structures and processes*. San Francisco: Freeman.
- Li, Y., & He, H. (2013). Evaluation of international brand alliances: brand order and consumer ethnocentrism. *Journal of Business Research*, 66(1), 89–97.
- Li, C. N., & Thompson, S. A. (1981). *Mandarin Chinese: A functional grammar*. Berkeley: University of California Press.
- Monga, A. B., & Lau-Gesk, L. (2007). Blending cobrand personalities: an examination of the complex self. *Journal of Marketing Research*, 44(3), 389–400.
- Murphy, G. L. (1988). Comprehending complex concepts. *Cognitive Science*, 12(4), 529–562.
- Osgood, C. E. (1980). *Lectures on language performance*. New York: Springer.
- Osherson, D. N., & Smith, E. E. (1981). On the adequacy of prototype theory as a theory of concepts. *Cognition*, 9(1), 35–58.
- Park, C. W., Jun, S. Y., Shocker, A. D., Milberg, S., & Lawson, R. (1991). Evaluation of brand extensions: the role of product feature similarity and brand concept consistency. *Journal of Consumer Research*, 18(2), 185–193.
- Park, C. W., Jun, S. Y., & Shocker, A. D. (1996). Composite branding alliances: an investigation of extension and feedback effects. *Journal of Marketing Research*, 33(4), 453–466.
- Rao, A. R., Qu, L., & Ruekert, R. W. (1999). Signaling unobservable product quality through a brand ally. *Journal of Marketing Research*, 36(2), 258–268.
- Rao, A. R., & Ruekert, R. W. (1994). Brand alliances as signals of product quality. *Sloan Management Review*, 36(1), 87–97.
- Rodrigue, C. S., & Biswas, A. (2004). Brand alliance dependency and exclusivity: an empirical investigation. *The Journal of Product and Brand Management*, 13(7), 477–487.
- Rosenthal, R. (1991). *Meta-analytic procedures for social research*. Newbury Park: Sage Publications.
- Rosenthal, R., & Rosnow, R. (1991). *Essentials of behavioral research: Methods and data analysis*. New York: McGraw-Hill.
- Simonin, B. L., & Ruth, J. A. (1998). Is a company known by the company it keeps? Assessing the feedback effects of brand alliances on consumer brand attitudes. *Journal of Marketing Research*, 35(1), 30–42.
- Smith, E. E., Osherson, D. N., Rips, L. J., & Keane, M. (1988). Combining prototypes: a selective modification model. *Cognitive Science*, 12(4), 485–527.
- Sproat, R., & Shi, C. (1988). Prenominal adjective ordering in English and Mandarin. In J. Blevins & J. Carter (Eds.), *Proceedings of the North Eastern Linguistic Society Vol. 18* (pp. 465–489). Amherst: Graduate Linguistics Student Association.
- Sweet, H. (1903). *A new English grammar: Logical and historical, part two: Syntax*. Oxford: Clarendon.
- Tai, J. H.-Y. (2002). Temporal sequence and Chinese word order. In *Form and function: Linguistic studies in honor of Shuanfan Huang* (pp. 331–351). Taipei: Crane Publishing.
- Uggla, H. (2004). The brand association base: a conceptual model for strategically leveraging partner brand equity. *Journal of Brand Management*, 12(2), 105–123.
- Valois, D. (2006). Adjectives: Order within DP and attributive APs. In M. Everaert & H. van Riemsdijk (Eds.), *The Blackwell companion to syntax Vol. 1* (pp. 61–82). Oxford: Blackwell Publishing.
- Voss, K. E., & Gammoh, B. S. (2004). Building brands through brand alliances: does a second ally help? *Marketing Letters*, 15(1), 147–159.
- Walchli, S. B. (2007). The effects of between-partner congruity on consumer evaluation of co-branded products. *Psychology & Marketing*, 24(11), 947–973.
- Washburn, J. H., Till, B. D., & Priluck, R. (2000). Co-branding: brand equity and trial effects. *Journal of Consumer Marketing*, 17(7), 591–604.
- Washburn, J. H., Till, B. D., & Priluck, R. (2004). Brand alliance and customer-based brand-equity effect. *Psychology & Marketing*, 21(7), 487–508.
- Zadeh, L. A. (1965). Fuzzy sets. *Information and Control*, 8(3), 338–353.
- Zhang, M. (1998). *Cognitive linguistics and noun phrases in Mandarin*. Beijing: China Social Sciences Press (in Chinese).