

The Development of Consumer-Based Consumption Constellations in Children

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Three studies using multiple methodologies investigated the development of consumer-based consumption constellations in children, finding an increasing linear age trend in the number of products and brands children use to form constellations, the degree to which these elements display symbolic complementarity, and the accessibility of constellations in memory. However, by early adolescence, as stereotypes become stronger, constellations become smaller and less flexible. Although seventh graders use more products and brands to form constellations than younger children, they do so in place of other ways to define roles, such as personality traits, therefore forming constellations with fewer elements overall. By late adolescence, individuals develop more flexible constellations with a greater number of elements.

My neighbor . . . he's such a "Crunchie." . . .
You know, vegetarian, environment lover, . . .
super smart, but so laid back . . . wears Birkenstocks[®], drives a Prius[®], eats only organic food. . . I bet he washes his clothes with Seventh Generation[®] detergent . . . a "Tree-Hugger" if you know what I mean [laughs].
(12-year-old girl)

The above quotation shows how children make assumptions about others based on the products and brands they own. Adults form such stereotypes quite often, and they are readily accessible (Lowrey et al. 2001; Solomon and Assael

1987). In fact, it is widely acknowledged that the meanings of products are often derived from their existence within a set of complementary products used by a social role, often referred to as a consumption constellation (Lowrey et al. 2001; Solomon and Assael 1987). As the quote suggests, children appear to form similar stereotypes, but little is known about the nature of children's consumption constellations. The purpose of this article is to investigate the presence of consumption constellations in children's cognitive processing and the structure of such constellations.

Three studies using multiple methodologies investigated the development of consumption constellations in children. We specifically sought answers to how early these cognitive structures develop, how they develop over time, which elements make up children's constellations, the degree of rigidity/flexibility with which they are held, and the level of accessibility of constellations in memory.

CONCEPTUAL OVERVIEW

Consumption Constellations

A *consumption constellation* is defined as a group of "complementary products, specific brands, and/or consumption activities used to construct, signify, and/or perform a social role" (Englis and Solomon 1996, 185). Although some products are consumed simply for their hedonic value, overall the elements of constellations often exhibit symbolic complementarity, or go together (as opposed to existing in isolation), to help a person enact a certain social role because of their functional, aesthetic, and/or sociocultural complementarity (Englis and Solomon 1996). As such, just as with personality traits, observations about the goods and services a person consumes may be

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encoded as category attributes and used to define, retrieve, and assign meaning to social roles (Solomon 1988). Although many of the symbolic meanings of products are derived from their association with social roles, each social role also has associated with it a collection of products and activities that are taken by society to define that role (McCall and Simmons 1982; Rose 1962; Solomon 1983). As noted by Levy (1964, 149), "a consumer's personality can be seen as the peculiar total of the products he consumes."

Researchers have typically described consumption constellations using products, brands, and other image-rich categories (i.e., categories that symbolically communicate information about a person), such as personality, demographics, geographics, and psychographics (e.g., "a 'Yuppie' is between 25 and 40 years old, highly educated, reasonably affluent, and concentrated in urban areas . . . health conscious and very active, with a high proclivity for luxury goods"; Solomon and Buchanan 1991, 99). However, these other image-rich categories are absent in formal definitions of consumption constellations. Given the symbolic nature of products and brands, consumers have a tendency to perceive products/brands and other image-rich role-related descriptions as inextricably intertwined. For example, Fiske (1982, 6) noted that "if you know somebody wears tweed, drives a small cheap foreign car and is introverted, forgetful and smart, those facts tend to go together because they fit your professor stereotype." Therefore, consumption constellations (at least from the consumer's perspective) should reflect this perception. As Solomon (1988, 252) points out, in describing social roles, "neither the social role domain nor the set of product categories are exhaustive. Other image-rich categories would also be relevant . . . as would allocations of discretionary leisure time (e.g., hobbies, restaurant choices, travel)." Indeed, early research on consumption constellations was based in part on research related to social roles. In Solomon's early work on constellations, he acknowledged that "product usage and consumption activities are used as data to infer lifestyles, personality traits, and social roles" (Solomon 1988, 235).

However, although researchers clearly acknowledge that consumers have a tendency to perceive products/brands and other image-rich role-related descriptions as intertwined, research on consumption constellations has evolved to focus narrowly on products and brands. We believe that incorporating other image-rich categories (e.g., personality and demographics/psychographics) into the definition will bring the study of consumption constellations back to its roots as a construct that inherently weaves together products and brands with what they symbolically communicate about individuals (e.g., their personality, their age, what they like to do, how much money they have, etc.).

Research on consumption constellations has also primarily been conducted from a marketer's perspective, in which marketers identify consumption constellations based on their analysis of the products, brands, and consumption activities that tend to appear together in both editorial and commercial media (Englis 1991; Englis, Solomon, and Ashmore 1994;

Solomon, Ashmore, and Longo 1992; Solomon and Greenberg 1993). Although these studies illustrate the potential usefulness of content analysis in cataloguing the content of consumption constellations as they appear in both commercial and cultural mass media vehicles, they cannot speak to the content of consumption constellations from the consumer's perspective. In the few studies in which consumers have been surveyed, they have been guided by the researchers to focus only on products and/or brands (Hogg and Michell 1997; Solomon 1988; Solomon and Assael 1987; Solomon and Buchanan 1991), which limits our understanding of how other image-rich categories (e.g., personality, demographics) might play a role in the consumer's perception of consumption constellations. What would consumer's consumption constellations look like if they were allowed more freedom in their choice of descriptions for a social role (i.e., if they were not instructed to list or match products and brands to a particular social role)?

To date, we know little about how consumption constellations are formed through the lens of consumers (i.e., a consumer-based perspective), where consumers are allowed to freely reveal products and brands as well as any other image-rich descriptions they deem appropriate to describe a social role. Our research adopts this consumer-based perspective and begins to develop an approach that allows researchers to capture a richer view of consumption constellations because consumers are likely to reveal relationships among products, brands, consumption activities, and other image-rich descriptions that communicate information about a social role.

We thus propose a revision and expansion of the basic consumption constellations definition to fully capture consumer perceptions of the symbolically intertwined descriptions that are used to construct, signify, and/or perform a social role. Specifically, we refer to consumption constellations from the consumer's perspective as *consumer-based consumption constellations*. To further distinguish our term from the original, we augment existing definitions of consumption constellations and refer to consumer-based consumption constellations as a collection of complementary products, brands, consumption activities, and other image-rich descriptions that consumers may use to construct, signify, or perform a social role, including, but not limited to, personality traits, demographics, and psychographic descriptions.

We use the above revision and expansion of the consumption constellations term to examine how consumer-based consumption constellations develop. A useful starting point to begin an investigation of this nature is to study this phenomenon in children. Accordingly, our research merges what we know from consumer research with what we know from developmental psychology to investigate quantitative and qualitative age-related changes in consumer-based consumption constellations in children. In doing so, we provide the first theoretical explanation for why we might observe age differences in children's consumer-based consumption constellations.

The Development of Consumer-Based Consumption Constellations

Anecdotal evidence suggests that children's consumption constellations will become larger and increasingly complex as they grow older and acquire more knowledge about products and brands. However, if we consider other factors in children's development, such as knowledge of stereotypes and social roles (which play a key role in adults' formation of consumption constellations), a different picture of how children's consumption constellations develop might emerge. It is possible that the size and complexity of children's constellations may peak at a certain age and decline thereafter because of age-related changes in their understanding and adoption of stereotypes and social roles.

To our knowledge, there has only been one study that has examined whether children recognize constellations. In a study with 5–12-year-olds, Davis (2000) found age to be a good predictor of how well children are able to recognize consumption constellations across different occupational groups (e.g., dentist, teacher, garbage collector), with older children being more accurate in matching occupations to their stereotyped consumption constellation. Davis (2000) answers two important questions for consumer researchers: (1) Are children able to recognize constellations for different occupations? (2) Are there age differences in children's ability to recognize constellations? However, several questions remain unanswered. These include the following: (1) Can children form consumption constellations for different social roles without the aid of experimental stimuli? (2) Are there social-cognitive developmental milestones that would help to explain age differences in the structure (e.g., size) and content (e.g., using products and brands vs. other elements) of consumption constellations? (3) What are the likely developmental changes that should occur after the age of 12?

To answer these questions, we study social roles that are familiar and salient in children's and adolescents' lives (e.g., "a cool kid"). We recognize that different processes may be relevant to more distant/less familiar roles (e.g., President), but as a starting point to understanding how consumption constellations develop in children, it is important to allow children the opportunity to discuss social roles that are familiar and meaningful to them. Otherwise, it would be difficult to determine whether the findings are the result of children's inability to form constellations in general or because the task is too difficult (i.e., asking children to describe a social role that is so distant or unfamiliar that they would have very little to say about the social role).

Next, we discuss the developmental milestones that contribute to children's consumer-based consumption constellations, particularly for social roles that are familiar and meaningful in their lives. Given that our research focus is on children, the social roles that would evoke thoughtful responses from participants are likely to be those that are peer related. Therefore, our discussion centers around children's understanding of consumption constellations as they relate to their growing social awareness.

Three highly interconnected elements set the stage for consumers to form consumption constellations: understanding stereotypes, role schemas, and consumption symbolism. All three elements, though distinct, are closely intertwined. That is, stereotypes are often based on assumptions about role schemas, and role schemas often contain stereotypes about playing a social role. Moreover, knowledge about consumption symbolism may influence one's stereotypes and role definitions, but at the same time knowledge of stereotypes and role schemas may also influence one's understanding of consumption symbolism. Regardless of the order in which these elements develop, all three must be in place to set the stage for children to form consumption constellations. We use this characterization to facilitate a discussion of why children as young as 8 years old have the ability to form such constellations and why age differences may exist in this ability. Because developmental research has evolved separately for each of these constructs, each is discussed as a distinct construct.

Understanding Stereotypes. Consumption constellations are a form of stereotype (Davis 2000) that involves abstract knowledge structures that link certain traits or behaviors to a social group to help in processing information about the group (Hamilton and Sherman 1994, 3). As such, stereotypes help people to be mentally efficient in making inferences about their environment (Allport 1954/1979). Similarly, in forming consumption constellations, people link a social role (e.g., Tree Hugger) to a set of characteristics that includes products and brands (e.g., Prius[™], organic foods) to assist in interacting with others.

Children's awareness and knowledge of broadly held stereotypes occur as young as age 3 (Daniel and Daniel 1998), increase throughout childhood (McKown and Weinstein 2003), and by middle childhood resemble stereotypes held by adults (Aboud 1988). When children's knowledge of the stereotype domain peaks, their knowledge becomes consolidated into a rigid, oversimplified fashion (Miller, Trautner, and Ruble 2006). We view stereotype rigidity as the degree to which children are unable or unwilling to waiver from a strong myopic view of the set of characteristics associated with a particular social role. For example, in responding to the social pressures to fit in, 12-year-olds may have a rigid stereotype and feel strongly that all popular kids wear clothes from only expensive stores and wear only well-known brands. Importantly, they are unable or unwilling to see that there are multiple descriptions that are equally valid for popular kids (e.g., some may shop at thrift stores and wear generic brands).

After this peak of rigidity, a phase of relative flexibility follows. Flexibility can be viewed similarly to "within-group variability" or "between-group similarity" (Trautner et al. 2005, 376). For example, flexibility might entail recognizing that there are multiple ways to describe the stereotype of popular kids (e.g., PC user, smart, mainstream vs. Apple[™] users, creative, artistic). We refer to each perspective as a symbolic cluster, or a group of symbolically related descriptions that represents one dimension of a social role.

Rigid social stereotypes tend to develop when children become acutely aware of group differences in a salient domain (e.g., gender or in-group/out-group). For example, there is evidence to suggest that gender stereotyping rigidity and in-group/out-group stereotyping rigidity increase as children enter early adolescence, when they become acutely aware of their social role image (Brown, Mory, and Kinney 1994; Galambos, Almeida, and Petersen 1990). Moreover, Solomon (1983) argues that, during periods of role transitions such as early adolescence, individuals view stereotypes rigidly because they are entering newly defined roles. Under such uncertain circumstances, individuals may be acutely sensitive to product cues that define their peer groups and the behaviors that might determine their own acceptance into those groups, leading to rigid adherence to these newly learned norms.

We know less about how children develop consumer stereotypes, which are beliefs about the traits of people based on their use of products or brands (Belk 1981; Belk, Bahn, and Mayer 1982). Studies have shown that children are capable of making stereotypical inferences about owners of products or brands by middle childhood (Achenreiner and John 2003; Belk, Mayer, and Driscoll 1984; Chaplin and John 2005) and that this ability is almost fully developed by middle to late childhood (Belk et al. 1982).

Understanding Role Schemas. A *schema* is an abstract structure of information (Anderson 1984). It is abstract in that it summarizes information about multiple cases, and it is structured in that it represents relationships among components. Role schemas are important for understanding how children develop consumption constellations because they contain shared representations such as norms and cultural stereotypes about enacting a particular social role, including tacit knowledge about the typical person in that role and knowledge of the constellation of products and brands that symbolize that role (Solomon 1988; Solomon and Buchanan 1991). For example, moms wear clothes from TargetTM, drink V8TM, and go grocery shopping at SafewayTM.

Children as young as 3 years old have an understanding of simple social roles, in which they understand a common role (e.g., doctor) that is defined by concrete behaviors or characteristics (e.g., a doctor helps sick people, lives in a big house, and wears a white coat). In earlier developmental stages, single experiences form the basis for consumption schemas; however, as schemas become more developed, generalizations begin to form based upon multiple experiences and schemas become more complex (John and Whitney 1986). By early adolescence (12 years old), individuals exhibit rigid adherence to a particular social role and oversimplify roles (Watson 1981). For example, “I am a soccer player—all soccer players wear AdidasTM, have shaggy hair, and drink GatoradeTM.” At the highest level of development, complex and abstract ideas are often met with conditional clauses (John and Whitney 1986). For example, “Soccer players work hard and drink GatoradeTM when they train, but when they aren’t training, they can be lazy and drink CokeTM.”

Understanding Consumption Symbolism. Knowledge of consumption symbolism is also critical for children to develop consumption constellations. Research has shown that adults buy products not only for their functional value but also for their symbolic value (Levy 1959; Wallendorf and Arnould 1988). There is also evidence to suggest that adults associate certain user characteristics (e.g., personality traits, status, lifestyles) with particular brands (Escalas and Bettman 2003; Fournier 1998; Gardner and Levy 1955; Muniz and O’Guinn 2001).

Although researchers have made much progress in understanding the symbolic complementarity of products and brands (Lowrey et al. 2001; Solomon and Assael 1987; Solomon and Buchanan 1991), as opposed to studying meanings of individual products in isolation (Dichter 1964; Dolich 1969), these studies have focused on adults. Researchers have examined children’s understanding of product symbolism or brand symbolism in isolation but have not examined children’s knowledge of the symbolic complementarity of products and brands. What we do know from prior work is that sometime between preschool and second grade (7–8 years old), children begin to make inferences about people based on the concrete cues of products they own (Belk et al. 1982; Belk et al. 1984; Mayer and Belk 1982). By third grade (8–9 years old), children show signs of understanding brand symbolism for a variety of brands (Chaplin and John 2005). With increasing age, children develop a more complex conceptualization of products (Belk et al. 1984) and brands (Achenreiner and John 2003), and they are able to judiciously incorporate more brands into their self-concepts (Chaplin and John 2005).

Development of Research Hypotheses

Based on developmental changes in three areas—understanding stereotypes, role schemas, and consumption symbolism—we propose that children’s consumption constellations develop in the following sequence. By middle childhood (approximately 8 years old), children begin incorporating symbolic products and brands into their role schemas, thereby forming simple constellations. However, at this early age, we only expect to see the beginnings of constellations, ones in which the elements may not exhibit a high degree of symbolic complementarity (Englis and Solomon 1996). Because they have less developed stereotypes and episodic role schemas than older children (John and Whitney 1986), as well as less experience with products and brands, 8-year-olds’ constellations should be made up of fewer elements and be relatively simple. For example, constellations might be made on the basis of being familiar with, or recalling single experiences with, different people, products, or brands (i.e., episodic schemas) as opposed to having an awareness of the symbolism associated with groups of products and brands and generalizing across experiences (i.e., generalized schemas).

Late childhood (around 10 years old) brings further developments in role schemas, stereotypes, and understanding

consumption symbolism (John and Whitney 1986; Watson 1981), which should result in larger and more complex constellations. More experience and a heightened appreciation for subtle meanings imbedded in product and brand images converges with a trend toward understanding social roles in more symbolically complex terms. Thus, we should expect 10-year-olds to add more elements to their constellations, choose elements that are more symbolically complementary, and recognize multiple dimensions of a social role.

Early adolescence (around 12 years old) brings an even greater appreciation of consumption symbolism and better understanding of social roles (Achenreiner and John 2003; Chaplin and John 2005; John 2008). However, knowledge becomes consolidated in a rigid “either-or” fashion (Trautner et al. 2005, 366). During early adolescence, a heightened sense of social awareness, combined with an increased appreciation for the social value of possessions (Brown, Clasen, and Eicher 1986; Chaplin and John 2005, 2007), sets the stage for individuals to have rigid and oversimplified impressions of people because having a more nuanced outlook could lead to costly mistakes in defining and enacting social roles (Graham and Juvonen 2002). That is, the safest route toward social acceptance is to form rigid stereotypes based on ideas shared by the majority. Thus, we anticipate that early adolescents will rely heavily on product and brand symbolism to define social roles to deal with these social pressures. Because 12-year-olds are acutely aware of in-group/out-group differences (Graham and Juvonen 2002), which is a precursor to holding rigid stereotypes (Galambos et al. 1990), we also expect 12-year-olds to be more judicious in selecting complementary elements. Relying on more products and brands to deal with social pressures, combined with being more judicious in how they define social roles, should result in 12-year-olds forming smaller and more rigid constellations composed primarily of products and brands, as compared to younger age groups. We should also expect these constellations to conform to a rigid stereotype with a myopic viewpoint (e.g., all cool kids are athletic and wear expensive brands), as opposed to having a more flexible stereotype in describing the social role (e.g., a cool kid can be either a PC user who is mainstream and not that creative or an Apple[®] user who is creative and artistic—two valid yet very different views of a cool kid, both of which could appear in the same consumption constellation).

In this research, we refer to each dimension of a social role as a symbolic cluster. For example, to describe a cool kid, descriptions such as PC user, mainstream, and smart would be symbolically connected to form one cluster, whereas descriptions such as Apple[®] user, creative, and artistic would be linked together to form a second cluster. Although all elements serve the purpose of contributing to the overall image of a social role, certain elements seem to go together better, thereby forming a cluster of a subset of the total elements. These clusters illuminate different dimensions of a social role. The highly connected elements of a particular subset may show a seemingly different image when compared

to a different subset of highly connected elements (e.g., smart PC user vs. creative Apple user); yet, when taken together, both clusters serve to build the multidimensionality of the social role. Note that these clusters need not be mutually exclusive. One cluster could focus on athletic-related items, and another cluster could focus on food-related items. The idea is that different clusters speak to different dimensions of the role.

It is important to note that the number of clusters is different from constellation size. We refer to the size of constellations as the total number of elements included in a consumption constellation, whereas a cluster represents a subset of the overall size, representing elements that are seen as more symbolically related to one another than to other elements in the constellation. As such, both constellation size and number of clusters should indicate how rigid (or flexible) children’s consumption constellations are (with smaller size and fewer clusters each indicating a higher degree of rigidity). Thus, an increasing age trend in the size of constellations (e.g., if children use more labels to describe a social role with increasing age) or an increasing age trend in the number of clusters would indicate that, as children grow older, their constellations become more flexible, allowing for not only more descriptions in general but also recognizing multiple dimensions of a social role. It is important to note that it is possible to have a large constellation with only one cluster, which would indicate that, although the constellation includes many elements, the elements are all symbolically linked together to illustrate a one-dimensional view of the social role (two clusters would indicate a slightly more flexible way of defining the role, with two dimensions to the social role). Thus, with richer clusters as a function of age but fewer clusters when children have the most rigid view of a social role, we should expect early adolescents to make more connections among constellation elements.

Based on the literature reviewed on children’s understanding of stereotypes, role schemas, and consumption symbolism, we forward four age-related hypotheses (operationalized as school grade level for the purposes of participant recruitment) regarding how consumption constellations may develop prior to adulthood.

- H1:** The size of children’s constellations (i.e., the total number of elements contained in a constellation from all five categories) will increase from third grade to fifth grade but will decrease by seventh grade.
- H2:** The number of clusters contained within a constellation will increase from third grade to fifth grade but will decrease by seventh grade.
- H3:** The number of products and brands in children’s constellations will increase linearly with age. Third graders’ constellations will have fewer products and brands than those of fifth graders,

and fifth graders' constellations will have fewer products and brands than those of seventh graders.

- H4:** Third graders' constellations will have fewer connections between elements than those of fifth graders, and fifth graders' constellations will have fewer connections between elements than those of seventh graders.

We tested these predictions in two studies. In study 1, we asked participants (third, fifth, and seventh graders) to create a constellation for a "cool kid." To explore further age differences, study 2 used the same method but with a wider age range (i.e., adding first and tenth graders). Additionally, to rule out the possibility that the age differences found in study 1 were social-role specific, we asked participants to create a second constellation for a different social role—"a quiet kid who doesn't have a lot of friends."

PRETEST

Prior to testing our age predictions, we conducted a pretest. The purpose of the pretest was threefold: to determine (1) which social roles were most salient for children, (2) whether the age groups of interest understood social roles and the symbolic meaning of products and brands to a reliable degree, and (3) which general categories (e.g., products, brands, personality characteristics) children use to form their constellations.

Method

Sample. Forty-five participants were recruited from the midwestern and northeastern United States: 15 third graders, 15 fifth graders, and 15 seventh graders. Boys and girls were equally represented. Third graders were chosen as the youngest age group because we believed younger children might be unlikely to have abstract relational understandings of product and brand groupings to a reliable degree. By 8 years of age, children are familiar with a variety of products and brands that can be grouped together in a constellation. Seventh graders were chosen as the oldest age group because they have rigid stereotypes as well as a more sophisticated understanding of consumption symbolism (Trautner et al. 2005).

Procedure. Consent forms were distributed to participating elementary and middle schools in a medium-sized midwestern town and two large cities in the northeast, inviting third, fifth, and seventh graders to participate. Prior to completing the task, each participant returned a signed consent form from his or her parent or guardian and a separate participant assent form written at an easier comprehension level. Each participant completed the pretest individually with the experimenter in a private room. The pretest lasted approximately 20 minutes.

Task. Participants were asked to describe a social role. They were presented with a list of social roles and asked

either to choose one from the list or to come up with an alternate that they knew well enough to describe. Each role on the list was previously tested for familiarity (e.g., teacher, celebrity, cool kid, and mom). Children were then asked to complete the following statement: "When I think of a [social role of child's choice] I think this person would ____." We gave children a choice of generating their own social role because we wanted participants to be familiar enough with the social role to find associations between the role and certain products, brands, and other descriptors. However, we also recognized that young children may need examples of social roles to get them started on this abstract task. Participants were also interviewed to gain an in-depth understanding of the general categories children use to form constellations. For example, participants were asked questions such as these: "Why do you say [social role; e.g., a doctor] [specific label; e.g., drives a BMW; eats vegetables; is nice]? If you had to choose three ways to describe [social role], how would you describe that person? Why did you choose [X] and not [Y]? Can I take [description] off of your list? What can I take off? Why? Did you forget to add anything? Can you tell me anything else about [social role] that you have not listed?"

Results

Understanding Social Roles. Results from the unstructured, open-ended task confirmed that children were familiar with a variety of social roles. Their knowledge of the symbolic associations with different social roles was evident in their long deliberation in choosing one social role for the task (i.e., some participants wanted to answer the question for more than one social role because they were familiar with multiple roles). Across all participants, 15 different social roles were selected. The top 10 roles were, in order of frequency chosen, cool kid, celebrity, doctor, quiet kid, mom, dad, teacher, coach, garbage collector, and basketball player. Unaided, children as young as age 8 were able to think of a variety of elements associated with social roles (see table 1). Equally important, even third graders explained to the researcher that certain descriptions they were writing down (e.g., rich, golf, PorscheTM) would apply to one role (e.g., doctor) but not to a different role (e.g., garbage collector), further demonstrating an understanding of stereotyping and consumption symbolism of a group of products and brands.

Categories Used in Constellations. Participants' responses were grouped into five categories: products (e.g., computer, cell phone), brands (e.g., AdidasTM, NikeTM), personal characteristics (e.g., snobby, friendly), demographics/psychographics (e.g., lives in Hollywood, concerned about the environment), and food items (organic food, junk food). (See table 2.) Based on participants' ability to describe multiple social roles using different products and brands, we determined that our age groups of interest understood product and brand symbolism to a reliable degree.

Importantly, we also determined that, in addition to the

TABLE 1
PRETEST: SOCIAL ROLE ELEMENTS

	Average number of social role elements		
	Third graders (n = 15)	Fifth graders (n = 15)	Seventh graders (n = 15)
Products	2.80 (1.04)	3.80 (1.27)	4.80 (1.72)
Brands	1.60 (1.12)	2.87 (1.13)	4.60 (1.22)
Personal characteristics	1.27 (1.16)	3.53 (1.30)	1.07 (1.12)
Demographics/psychographics	3.33 (1.40)	2.53 (1.13)	1.93 (1.50)
Food items	2.00 (1.31)	2.93 (1.44)	1.60 (1.06)
Total	11.00 (3.27)	15.67 (2.69)	14.00 (2.54)

NOTE.—Numbers in parentheses are standard deviations.

categories that are typically examined in consumption constellation studies (i.e., products and brands), three additional themes emerged from our open-ended task (i.e., personal characteristics, demographics/psychographics, and food items). Thus, we incorporated these emergent themes into our study of consumer-based consumption constellations, particularly because all three categories were frequently and consistently used across all ages to describe social roles.

Discussion

One of the aims of this research was to study consumption constellations from the consumer's perspective. As such, providing participants with an unstructured, open-ended

task, as opposed to asking them to tailor their responses to narrowly focus on products and brands (as is typically done in consumption constellation studies), allowed us to look at constellations through the consumers' lens.

Our pretest results indicate that children as young as age 8 are capable of forming consumption constellations, even when given no guidance on what specific categories to think about. Not only do they talk about products and brands (without being prompted to focus on these categories), but they also discuss personality traits, demographics, and psychographics, which researchers have clearly acknowledged to be intertwined with products and brands. Interestingly, when asked which types of descriptions were most important

TABLE 2
SAMPLE COLLAGE STIMULI

Products	Brands	Personal characteristics	Demographics/ psychographics	Food items
Cars	Adidas™	Quiet	Rich	Fruit
Videogames	Nintendo Wii™	Loud	Boy	Pizza
Expensive clothes	Gatorade™	Snobby	Likes to exercise	Milk
Popular shoes	K-Mart™	Smart	Plays sports	Junk food
Jeans	Apple™	Lazy	Likes to go to new places	Healthy food
Magazines	McDonald's™	Has a lot of friends	Goes to parties	Organic food
Dresses	Coke™	Popular	Doesn't have a lot of money	Vegetables
TV	Target™	Boring	Plays alone	Sweet stuff like candy, cookies
Bike	Limited Too™	Cute	Buys expensive things	Expensive food
Skateboard	Toys R' Us™	Happy	Girl	Cheese
Books	Express™	Fast	Likes to cook	Vitamins
Computer	Gap™	Hard worker	Likes to read	Juice
Boardgames	Hurley™	Nice	Likes to knit or sew	Soda
Baseball caps/other hats	Nike™	Leader	Likes to be with friends	Water
Dolls	Payless Shoes™	Shy	Likes to shop	Sandwiches
Puzzles	Burger King™	Helpful	Likes to sleep	Rice
Cell phone	Abercrombie and Fitch™	Follower	Likes arts and crafts	Fast food
Stuffed animals	iPod™	Fun	Sits around	Chips
Hairspray	Hollister™	Sad	Likes music	Cereal
Airplanes	Subway™	Not popular	Likes to be on the Internet	Salads

NOTE.—Elements were revealed by participants in the pretest and subsequently used in studies 1 and 2. This list was slightly modified for the "Quiet Kid" collage. Importantly, participants were not required to use these labels—blank cards and markers were made available so participants could make up their own descriptions as necessary.

in describing a social role, participants across ages reported brands and products. However, they also reported that other image-rich descriptions, such as personality traits or demographic factors, were important in contributing to the overall constellation. For example, when asked what descriptions he would like to keep and which ones he would like to get rid of when describing a teacher, a boy in third grade responds:

I would keep all the names of stores and things [i.e., brand names]. . . . So, I'm keeping iPod[®]. I guess I'd have to keep "cool," because an iPod[®] is just really cool. . . . It just looks cool and you can play cool music. Any teacher who has an iPod[®] is cool. You know they are going to be fun.

Responding to a similar question, a girl in seventh grade responds:

I guess I can get rid of "tall and shy," but I have to keep Uggs[®] because that's the thing now. They are so cool. Do you have a pair? Maybe you're too old, but Uggs[®] are cool boots all the girls wear in school. These girls are really into what looks good, what's hot. Some are nice but some are just into boys. I'm one of the smart and nice Uggers. [Laughs] . . . I'll keep smart and nice since I'm keeping Uggs[®].

Thus, it appears that these emergent themes contribute to the full scope of consumer-based consumption constellations by adding imagery to products and brands.

Although the pretest provided valuable insights into the content of children's constellations, it was not designed to test our hypotheses. However, given the adequate sample size and participants' level of understanding of the task, we performed preliminary age analyses. We found that third graders used fewer total elements ($M = 11.00$) to describe a social role than fifth graders ($M = 15.67$; $F(1, 28) = 4.27$, $p < .01$) and that fifth graders used more total elements than seventh graders ($M = 14.00$; $F(1, 28) = 1.93$, $p < .01$; hypothesis 1). Also, given that participants noted products and brands to be the most important in helping them describe a social role, we examined the number of elements in these two categories. As expected, the number of products chosen increased linearly with age (M 's = 2.80, 3.80, 4.80, respectively, $p < .03$ for all contrasts), as did the number of brands (M 's = 1.60, 2.87, 4.60, respectively, $p < .01$ for all contrasts; hypothesis 3).

STUDY 1

The purpose of this study was to formally test our age-related hypotheses. To do so, we asked participants to describe the social role of a cool kid by building collages. The collage methodology has been used with success in studying children's development of product and brand symbolism across a wide age range (Chaplin and John 2005, 2007). It is also a task that does not rely on retrieval and verbalization skills, which may make it easier for younger children to

express constellations that exist in their memory, as opposed to using a more abstract, completely unstructured task (cf. Peracchio 1992). Therefore, the collage methodology is useful for testing our predicted age differences in children's consumption constellations.

Method

Sample. Sixty-one participants were recruited from the midwestern and northeastern United States: 20 third graders, 21 fifth graders, and 20 seventh graders. Boys and girls were equally represented.

Procedure. The procedure used to gain parental consent and participant assent was identical to that of our pretest, as was the location and duration of the study sessions. Again, each participant completed the study individually with the experimenter in a private room. We used Chaplin and John's (2005) collage methodology to measure children's formation of consumption constellations (described next). The task was described and then demonstrated by the interviewer to ensure understanding of the task instructions. Participants were interviewed during the task to gain a better understanding of why certain labels were chosen over others. A photograph of the collage was taken for later data analysis. After completing the task, participants were debriefed and asked to not talk about the study with their peers until everyone had completed the study. The entire procedure took from 15 to 30 minutes to complete.

Task. In the pretest, we found that, when given the freedom to choose a social role to define, more than half of our sample chose the role of a cool kid, indicating that this role resonates most with our ages of interest. Therefore, in study 1, we asked participants to complete the following statement: "When I think of a cool kid I think this person would ____." Participants were asked to construct their collage by choosing among a set of labels/pictures and placing them on their collage board. Participants were asked to describe a cool kid in any way they wished—using some, all, or none of the categories provided. Having children create collages for the same social role allowed us to make cleaner comparisons across ages by avoiding confounds associated with using different roles across participants.

To assess the degree to which elements within a constellation are connected (hypotheses 2 and 4), we added one additional step to Chaplin and John's (2005) methodology. Similar to John et al. (2006), we asked participants to use lines to connect elements on the collage that they felt were closely related to one another. Specifically, participants were told: "You can connect as many or as few descriptions as you want. You can also make connections wherever and with whatever descriptions you want. Just use a line to connect descriptions that you think should be connected and tell me why you think they should be connected. Remember, you don't even have to make any connections." Participants were reminded that there were no right or wrong answers. The purpose of this step was for participants (1) to reveal

complementarity among the diverse categories and (2) to reveal different dimensions of a social role (clusters of symbolically related elements).

Stimuli. Results from our pretest indicated that children's descriptions for a variety of social roles came from five categories (i.e., products, brands, personal characteristics, demographics/psychographics, and food items), which are symbolically intertwined to contribute to a rich view of consumer-based consumption constellations. Therefore, 20 laminated labels/pictures that represented each of the five categories from the pretest (100 labels in total) were placed on blank Post-It[®] boards. Pilot tests indicated that the labels would resonate with participants of different ages and genders. We followed Chaplin and John's (2005) and John's (2008) guidelines to ensure that results were not biased by participants' familiarity with the stimuli. The final set of items excluded those not familiar to most children in each age group. Importantly, participants were instructed that they were not required to use any of the prepared labels and that they were welcome to develop their own descriptions. Accordingly, participants were provided with blank cards and markers in the event that our set of stimuli was missing descriptions they wanted to use.

Measures. To assess the size of children's consumption constellations (hypothesis 1), we calculated the total number of elements from each board, which also allowed us to test hypothesis 3 (i.e., number of products and brands in constellations). To test hypothesis 2 (the number of different dimensions of a role contained in a constellation), we summed the number of symbolic clusters in each constellation. A symbolic cluster was identified by at least two elements connected to the same node (i.e., at least three elements; see fig. 1). As such, each cluster is composed of elements that participants view to be more closely related to each other than other elements in the constellation. Moreover, although each cluster helps to describe the same social role, each cluster contributes to the overall multidimensionality of the social role. For example, in the bottom portion of figure 1, we see that a fifth-grade girl formed one cluster by connecting two elements "Has a lot of friends" and "Rich" to a common node, "Abercrombie & Fitch[®]," to define the role in terms of brand symbolism. She formed another cluster by connecting "Fruits and vegetables" and "Coke[®]" to "Pizza" to define the role in terms of food symbolism. She also formed a third cluster by connecting "Snobby" and "Cute" to "Girl" to define the role in terms of demographics and personality traits. Finally, to test hypothesis 4, we calculated the total number of connections participants made between elements.

Results

Tests of Hypotheses. Planned contrasts were used to test for age differences in consumption constellations. As expected, we found a nonlinear trend in the size of children's consumption constellations (hypothesis 1) and the number

of clusters used to describe a social role (hypothesis 2). Specifically, the collages of third graders had fewer total elements ($M = 19.85$) than those of fifth graders ($M = 24.48$; $F(1, 39) = 4.97, p < .01$), and the collages of seventh graders also had fewer total elements ($M = 22.80$) than those of fifth graders ($F(1, 39) = 2.13, p = .02$). Additionally, we found that elements of a constellation were symbolically clustered and that the number of clusters varied by age. Third graders' collages had fewer clusters ($M = 1.14$) than those of fifth graders ($M = 3.00$; $F(1, 39) = 4.47, p < .01$), and compared to fifth graders, seventh graders also had fewer clusters ($M = 2.00$; $F(1, 39) = 2.13, p = .02$), indicating a more rigid stereotype of a cool kid by early adolescence (see table 3).

A qualitative analysis of our interviews with participants also revealed important insights into why they chose certain descriptions and why they formed certain clusters, helping to explain the issue of rigidity. When asked to describe why she chose certain labels for her collage, a seventh-grade girl responded:

Well it could be a girl or a guy obviously. But all the other descriptions are pretty straightforward. . . . You've got the basic brand names that *all* cool kids wear—Nike[®], Adidas[®], Hollister[®], Seven Jeans[®], Coach[®], you know, those types of brands. Then you've got the types of things they *all* do, like hang out at the mall or Burger King[®]. . . . They eat junk, pure junk. That's actually not very cool if you ask me, but *all* the cool kids in my school just eat junk. . . . I can't name one cool kid who is a health freak.

The fact that this girl describes "all" cool kids as behaving in the same way implies rigidity in how she views the social role. Contrast this with the response to a similar question from a fifth-grade boy:

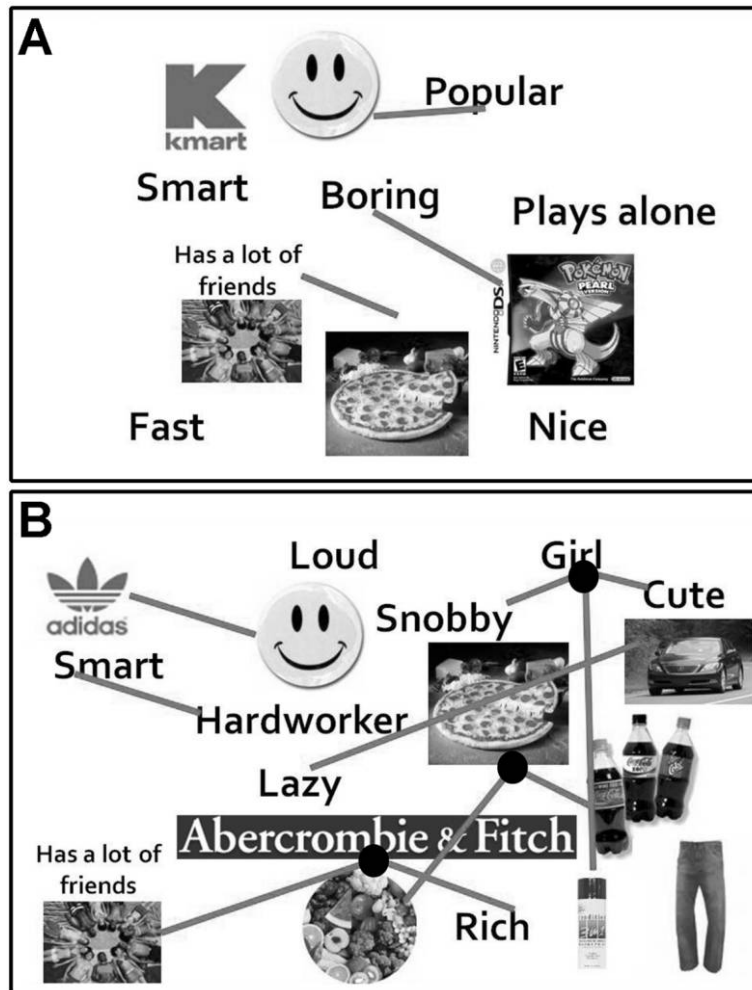
I think it's cool to be smart and have video games that everyone else wants. . . . You're also cool if you have a cell phone and can go to the mall without your parents. I guess you can still be cool if you don't have a cell phone, but you have to be really good at something like basketball or get good grades. People have to pay attention to you. That's why some really mean kids are cool even though they shouldn't be—they wear really nice clothes, have cell phones, but aren't very nice to people they aren't friends with.

It is clear that this boy is more flexible in that he is willing to entertain different dimensions of the social role. Interestingly, collages with fewer clusters were consistently described by participants with phrases such as "If you don't ___, you aren't cool," "You would never see a cool kid ___,", and "They always ___,", suggesting that these participants had a rigid view of the social role.

We also expected and found an increasing linear age trend in the number of products and brands selected (hypothesis 3). Consistent with those expectations, third graders used fewer products than fifth graders ($M = 4.80$ vs. $M = 5.81$; $F(1, 39) = 2.28, p = .01$) and also used fewer

FIGURE 1

EXAMPLES OF CHILDREN'S CONSUMPTION CONSTELLATIONS:
A, THIRD-GRADE GIRL, ZERO CLUSTERS; B, FIFTH-GRADE GIRL, THREE CLUSTERS



NOTE.—Color version available as an online enhancement.

brands ($M = 3.65$ vs. $M = 4.90$; $F(1, 39) = 3.77$, $p < .01$). In turn, seventh graders used more products than fifth graders ($M = 6.77$ vs. $M = 5.81$; $F(1, 39) = 2.53$, $p < .01$), and they also used more brands ($M = 6.50$ vs. $M = 4.90$; $F(1, 39) = 5.00$, $p < .01$).

Finally, we hypothesized and found an increasing age trend in the number of connections between elements on a collage (hypothesis 4). Specifically, fifth graders made more connections than third graders ($M = 13.48$ vs. $M = 5.65$; $F(1, 39) = 8.59$, $p < .01$), and seventh graders made more connections than fifth graders ($M = 20.45$; $F(1, 39) = 11.77$, $p < .01$). In sum, study 1 provides full support for our hypotheses.

Supplemental Analyses. Although not formally hypothesized, we found a decreasing age trend in episodic

schemas and an increasing age trend in generalized schemas. Specifically, 70% of third graders, 43% of fifth graders, and 15% of seventh graders explained their constellation choices using episodic schemas based on single experiences. In contrast, 30% of third graders, 57% of fifth graders, and 85% of seventh graders explained their constellations based on generalized schemas.

Also, although we operationalized clusters as three or more elements connected together, it is possible that dimensions of a role could also be conveyed with only two elements, which, if excluded from the analysis, might misrepresent the data. However, we found that if we operationalized a cluster as at least two items linked together, a number of issues arose. First, the symbolic richness that comes with describing a cluster made up of three or more

TABLE 3
STUDY 1: COOL KID CONSUMPTION CONSTELLATION

Category	Average number of cool kid descriptions across categories		
	Third graders (<i>n</i> = 20)	Fifth graders (<i>n</i> = 21)	Seventh graders (<i>n</i> = 20)
Products	4.80 (1.64)	5.81 (1.17)	6.77 (1.08)
Brands	3.65 (1.04)	4.90 (1.09)	6.50 (.95)
Personal characteristics	4.20 (1.11)	6.33 (1.46)	4.15 (.93)
Demographics/psychographics	3.30 (1.42)	2.62 (1.02)	1.70 (1.22)
Food items	3.90 (1.25)	4.81 (1.54)	3.75 (1.02)
Total elements	19.85 (3.08)	24.48 (2.87)	22.80 (2.09)
	Average number of clusters and connections		
Clusters	1.14 (.43)	3.00 (1.09)	2.00 (.97)
Connections	5.65 (3.79)	13.48 (1.72)	20.45 (2.06)

NOTE.—Numbers in parentheses are standard deviations. Although we did not develop hypotheses specific to the last three categories (personal characteristics, demographics/psychographics, and food items), they are included in this table to show how the total number of elements was calculated.

items (revealed in the interviews) is lost when we examine how participants describe the connection between a pair of descriptions (e.g., Nike[™] is connected to Adidas[™] because they are both shoes vs. Nike[™] is connected to Adidas[™] and Snobby because both are shoes that snobby rich kids wear). Second, we were able to add few clusters to the analysis (less than 9% of all clusters were those that were formed with two items linked together). Third, our results were the same regardless of whether we operationalized clusters as two or more elements or three or more elements (i.e., same age differences).

Similar to our pretest, products and brands were reported as the most important categories to describe a social role (35% of third graders, 58% of fifth graders, and 82% of seventh graders chose products and brands). We also found that products and brands composed a larger percentage of seventh graders' collages than those of fifth graders (59% vs. 44%; $F(1, 39) = 8.06, p < .01$) but that there were no significant differences between third graders and fifth graders (42% vs. 44%; $F(1, 39) = .89, p > .30$). These results suggest that, between late childhood and early adolescence, products and brands become increasingly central to children's definitions of social roles, even as children become more rigid and judicious in selecting elements.

Finally, in addition to the size of constellations, prior work with adult samples has examined the consistency of levels of stereotyping across respondents (Englis and Solomon 1995). Interestingly, we found that, with children, the age cohort that displayed the greatest rigidity in terms of constellation size also displayed the highest level of stereotyping (i.e., greatest consensus) in specific elements that belong to a constellation. To show this effect, we summed up the total number of elements that were chosen by all participants from

each age cohort and found that seventh graders, who displayed the most rigid stereotype for a cool kid (indicated by their smaller constellations and fewer symbolic clusters) also shared the most number of elements across constellations. Specifically, 41% of the elements in seventh graders' constellations were identical, as compared to 25% for fifth graders and 15% for third graders.

Discussion

The findings from study 1 provide the following insights. First, this study provides important information regarding the content of children's constellations. We observed that children and adolescents rely heavily on image-rich descriptions such as personality traits or demographic/psychographic factors to explain why certain products/brands should be included in a consumption constellation for a "cool kid." In fact, when we reanalyzed the data without personality traits and demographic/psychographic descriptions and examined only products and brands, the symbolic richness inherent in clusters made up of a variety of themes goes away. Virtually all of the collages consist of linkages between products/brands and personality traits and/or demographics/psychographics (e.g., Apple[™] is connected to Fun, Smart, and Leader) and relatively few linkages strictly between products/brands. This makes sense, as the connections between products are driven by the common social role they facilitate and making direct connections between products as they relate to the common role would probably be seen as redundant by participants.

Second, this study uncovered age differences in how the content of constellations is organized into role schemas. Younger children's constellations were formed on the basis of single experiences, whereas those of older children were

formed on the basis of generalizations across multiple experiences. To illustrate, a third-grade girl described cool kids in the following way:

I know *this kid* who is really cool. He likes to play video games. I know *another kid* who is really really cool and I saw him at Kmart[®] one day. *My brother* is cool too. He loves pepperoni pizza. I think cool kids are nice. (See fig. 1, A)

In contrast, in explaining his cool kid collage, a seventh-grade boy said:

This is easy. . . . *They're* rich. *They're* all pretty much the same. *They* like the same stuff, talk the same, *they're* such groupies. . . . You pretty much know whether *they* are cool or not. You see, it's just a check list of what *they* have, who *they* hang out with, and how much money *they* have. (See fig. 2, A)

Finally, although we found a linear age trend in the number of connections, we found a nonlinear age trend in the number of symbolic clusters, suggesting that changes in children's consumption constellations with age cannot be due to experience alone because such an account would predict that the size of the constellations and the number of clusters would increase with age due to children's increasing experience. The decrease in the number of symbolic clusters between fifth grade and seventh grade suggests that seventh graders hold a more rigid stereotype of a cool kid, using fewer definitions of a social role, despite having richer consumer experiences and knowledge (i.e., more connections) than their younger counterparts.

This study raises a number of questions: (1) What do consumption constellations look like prior to third grade? (2) Does the rigidity in consumer stereotyping found in seventh graders' constellations increase, decrease, or stay the same at older ages? (3) Are the age findings specific to the social role of a cool kid, or will the same age trends emerge for a less positive social role? (Indeed, over 80% of participants indicated that most kids want to be cool.) We explore these questions in study 2 by adding two age groups (first graders and tenth graders) and asking participants to create a second collage for a less positive social role.

Although we did not develop hypotheses for first graders and tenth graders, we anticipate that even though first graders may hold consumption constellations in memory, their constellations should be as simple (if not simpler) than those of third graders, given their knowledge of role schemas, stereotypes, and consumption symbolism. Additionally, because stereotyping has been characterized as moving from beginning awareness (early to late childhood) to rigidity (early adolescence) to flexibility (late adolescence; Trautner 1992), we expect tenth graders' social role definitions to be more flexible than those of seventh graders. Indeed, Steinberg and Monahan (2007) provided evidence that resistance to peer influence and conformity increases linearly between the ages of 14 (ninth

grade) and 18 (twelfth grade). This should lead to larger constellations and more clusters for tenth graders.

STUDY 2

Method

Sample. One hundred participants were recruited from an elementary school and three summer camps in the mid-western and northeastern United States: 20 first graders, 20 third graders, 20 fifth graders, 20 seventh graders, and 20 tenth graders. Boys and girls were equally represented.

Procedure. The procedure used to examine children's formation of consumption constellations was identical to that of study 1. Again, we used Chaplin and John's (2005) collage methodology, and we followed the same steps to record data as in study 1 (e.g., interviewing participants, taking a photograph of the collage). However, in this study, participants completed two collages for two different social roles—the "cool" kid used in study 1 and a "quiet kid who doesn't have a lot of friends," with a distraction task in between (described below). The order in which participants completed the two collages was randomized to control for order effects (none were obtained). The task was described and then demonstrated by the interviewer to ensure understanding of the task instructions. The entire procedure took from 30 to 45 minutes to complete.

Tasks. Participants were asked to complete two collages for two different social roles—a "cool kid" and a "quiet kid who doesn't have a lot of friends." Pretests showed that children and adolescents were familiar with these social roles at a level where they could make multiple symbolic associations with each role. Pretests also indicated that children identified a "cool kid" as a role they would like to enact and a "quiet kid who doesn't have a lot of friends" as a role they would not like to enact.

After participants completed the first collage and a photograph of the collage was taken, they were informed that the first part of the study was over and all materials for that part of the study would be stored away for later data analysis. Participants then completed a distraction task—an "I Spy" task that required participants to find and circle hidden pictures. The purpose of this task was to decrease the chances of participants transferring their ideas from one collage to the next due to task similarity.

After completing the "I Spy" task, participants were asked to go to the other side of the room, where the experimenter unveiled another set of stimuli and instructed them to build a second collage. Even though many of the descriptions were the same (e.g., "Apple[®]" and "Rich" were descriptions that could have been used to form constellations for either a cool kid or a quiet kid), participants were presented with a fresh set of stimuli as a second way to minimize the possibility of participants wanting to go back to their first collage for ideas.

Stimuli. For the "cool kid" collage, we used the stimuli from study 1. However, pretests indicated that some different

descriptions would be needed for a “quiet kid” collage. Therefore, we followed Chaplin and John’s (2005) and John’s (2008) guidelines for stimuli development to select stimuli for the new role. The set of stimuli for both collages was made up of the same categories (products, brands, personal characteristics, demographics/psychographics, and food items). The same number of descriptions (100 per board) were available on each theme board for both collage tasks. Participants were also provided with blank cards and markers in the event that we missed descriptions they wanted to use.

Results

Cool Kid Findings. The cool kid collage and the quiet kid collage were analyzed separately. The findings for the cool kid collage replicate the study 1 findings for third, fifth, and seventh graders (see table 4). The cool kid collages of third graders had fewer total elements ($M = 19.40$) than those of fifth graders ($M = 25.80$; $F(1, 38) = 5.92$, $p < .01$), and seventh graders’ collages also had fewer total elements ($M = 22.05$) than those of fifth graders ($M = 25.80$; $F(1, 38) = 2.95$, $p < .01$), supporting hypothesis 1. Third graders’ collages also had fewer clusters ($M = 1.24$) than those of fifth graders ($M = 3.10$; $F(1, 38) = 4.70$, $p < .01$), and seventh graders’ collages also had fewer clusters ($M = 1.85$) than those of fifth graders ($M = 3.10$; $F(1, 38) = 2.69$, $p < .01$), again indicating a rigid, less flexible stereotype (hypothesis 2).

We obtained additional evidence to support hypothesis 3. Third graders used fewer products ($M = 3.90$) than fifth graders ($M = 5.55$; $F(1, 38) = 2.55$, $p < .01$) and fewer brands ($M = 1.65$ vs. $M = 3.75$; $F(1, 38) = 5.66$, $p < .01$). Seventh graders used more products ($M = 7.30$) than fifth graders ($M = 5.55$; $F(1, 38) = 2.54$, $p < .01$) and

more brands ($M = 5.25$ vs. $M = 3.75$; $F(1, 38) = 2.90$, $p < .01$). Finally, we found an increasing trend in the number of connections made within a constellation, providing more support for hypothesis 4. Specifically, fifth graders made more connections ($M = 11.15$) than did third graders ($M = 5.90$; $F(1, 38) = 6.01$, $p < .01$), and seventh graders made more connections ($M = 17.25$) than did fifth graders ($F(1, 38) = 4.69$, $p < .01$).

Our findings also indicated that first graders did not differ from third graders in any way (i.e., size of collage, number of clusters, number of items from both categories, number of connections), suggesting no major changes in constellations between first grade and third grade. We found that tenth graders’ collages had more total elements than those of seventh graders ($M = 28.00$ vs. $M = 22.05$; $F(1, 38) = 5.17$, $p < .01$) and that they had more clusters ($M = 4.50$ vs. $M = 1.85$; $F(1, 38) = 9.50$, $p < .01$). Compared to those of seventh graders, tenth graders’ constellations had more brands ($M = 5.25$ vs. $M = 7.10$; $F(1, 38) = 3.81$, $p < .01$) but not more products ($M = 7.30$ vs. $M = 6.70$; $F(1, 38) = .91$, $p > .50$), and they had more connections between elements ($M = 17.25$ vs. $M = 19.50$; $F(1, 38) = 1.73$, $p < .04$; see fig. 2).

Quiet Kid Findings. Results for the quiet kid collage replicate our findings for the cool kid collage. Specifically, the quiet kid collages of third graders had fewer total elements ($M = 15.61$) than those of fifth graders ($M = 20.91$; $F(1, 38) = 5.30$, $p < .01$), and seventh graders’ collages also had fewer total elements ($M = 18.01$) than those of fifth graders ($F(1, 38) = 2.32$, $p = .01$), supporting hypothesis 1 (see table 5). Additionally, we observed that third graders had fewer clusters ($M = 1.08$) in their constellations than fifth graders ($M = 2.50$; $F(1, 38) = 3.94$, $p < .01$), and

TABLE 4

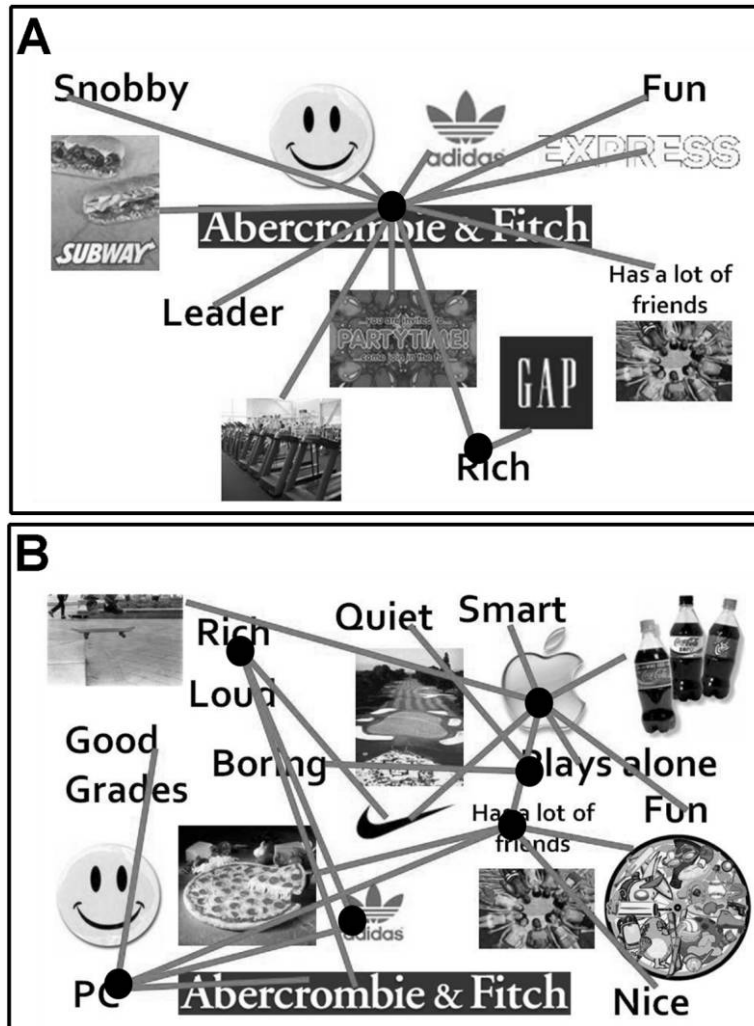
STUDY 2: COOL KID CONSUMPTION CONSTELLATION

Category	Average number of cool kid descriptions across categories				
	First graders ($n = 20$)	Third graders ($n = 20$)	Fifth graders ($n = 20$)	Seventh graders ($n = 20$)	Tenth graders ($n = 20$)
Products	3.60 (1.96)	3.90 (2.02)	5.55 (2.06)	7.30 (2.30)	6.70 (1.84)
Brands	1.75 (1.12)	1.65 (.99)	3.75 (1.33)	5.25 (1.89)	7.10 (2.08)
Personal characteristics	4.90 (1.41)	4.75 (1.33)	6.05 (1.40)	3.34 (1.42)	4.65 (1.46)
Demographics/psychographics	5.40 (2.04)	5.10 (1.77)	5.90 (1.21)	3.35 (1.31)	5.30 (1.08)
Food items	3.85 (1.27)	4.00 (1.12)	4.55 (1.23)	2.80 (1.80)	4.25 (1.16)
Total elements	19.50 (3.10)	19.40 (2.00)	25.80 (3.79)	22.05 (2.23)	28.00 (2.92)
Category	Average number of clusters and connections				
	First graders ($n = 20$)	Third graders ($n = 20$)	Fifth graders ($n = 20$)	Seventh graders ($n = 20$)	Tenth graders ($n = 20$)
Clusters	.85 (.80)	1.24 (.74)	3.10 (1.89)	1.85 (.88)	4.50 (.89)
Connections	5.00 (2.08)	5.90 (1.79)	11.15 (2.93)	17.25 (5.04)	19.50 (2.91)

NOTE.—Numbers in parentheses are standard deviations. Although we did not develop hypotheses specific to the last three categories (personal characteristics, demographics/psychographics, and food items), they are included in this table to show how the total number of elements was calculated.

FIGURE 2

EXAMPLES OF ADOLESCENTS' CONSUMPTION CONSTELLATIONS:
A, SEVENTH-GRADE BOY, TWO CLUSTERS; B, TENTH-GRADE BOY, SIX CLUSTERS



NOTE.—Color version available as an online enhancement.

seventh graders also had fewer clusters ($M = 1.75$) than fifth graders ($F(1, 38) = 1.82, p = .03$), again indicating a rigid stereotype (hypothesis 2).

When asked to describe why he chose certain labels for his quiet kid collage, a seventh-grade boy responds:

Everyone pretty much knows that the quiet kids who don't have a lot of friends are also the ones who don't really know what's in. They don't shop at popular stores like Abercrombie & Fitch[®]. They don't talk much to people. I mean, they are super shy in a bad way. They *all* sit around playing video games all day long instead of playing football or some other popular sport. . . . I'm not saying that they aren't nice. They're just *all the same*—quiet, shy, really smart, they don't

care what they wear or what they look like, and they're lazy because they sit and play video games all the time.

When asked a similar question, a fifth-grade boy responds:

I just chose the pictures that describe different quiet kids I know. They are all shy and smart, but some are friendlier than others. Some like sports. Some only like video games. Some eat healthy, and some eat junk food like soda and pizza. I think that most quiet kids would wear cheaper clothes, like from Kmart[®] or Target[®], not from expensive places like Gap[®] or Old Navy[®]. I guess I know a lot of quiet kids so that's why I have a lot of different things on here.

TABLE 5
STUDY 2: QUIET KID CONSUMPTION CONSTELLATION

Category	Average number of quiet kid descriptions across categories				
	First graders (<i>n</i> = 20)	Third graders (<i>n</i> = 20)	Fifth graders (<i>n</i> = 20)	Seventh graders (<i>n</i> = 20)	Tenth graders (<i>n</i> = 20)
Products	3.31 (1.23)	3.51 (1.27)	4.71 (2.11)	5.76 (1.85)	6.91 (1.45)
Brands	2.36 (.89)	2.31 (.73)	4.06 (1.29)	5.31 (1.59)	6.81 (1.57)
Personal characteristics	4.17 (1.62)	4.02 (1.14)	5.32 (1.39)	2.67 (1.35)	3.92 (1.51)
Demographics/psychographics	3.84 (1.69)	3.49 (1.34)	4.04 (1.48)	2.19 (.94)	3.44 (1.70)
Food items	2.38 (.99)	2.28 (1.05)	2.78 (1.56)	2.08 (.91)	2.48 (1.29)
Total elements	16.06 (2.16)	15.61 (2.37)	20.91 (3.03)	18.01 (2.09)	23.56 (2.95)
Category	Average number of clusters and connections				
	First graders (<i>n</i> = 20)	Third graders (<i>n</i> = 20)	Fifth graders (<i>n</i> = 20)	Seventh graders (<i>n</i> = 20)	Tenth graders (<i>n</i> = 20)
Clusters	.65 (.40)	1.08 (.65)	2.50 (1.57)	1.75 (.97)	3.35 (1.69)
Connections	4.30 (2.54)	5.35 (2.25)	6.30 (2.36)	8.55 (3.85)	17.10 (4.46)

NOTE.—Numbers in parentheses are standard deviations. Although we did not develop hypotheses specific to the last three categories (personal characteristics, demographics/psychographics, and food items), they are included in this table to show how the total number of elements was calculated.

As was the case with the cool kid collages, the quiet kid collages that had fewer clusters were consistently described by participants with phrases such as “They always ____,” “Most quiet kids ____,” “You never really see a quiet kid ____,” suggesting these participants had a less flexible view of a quiet kid.

We obtained additional support for hypothesis 3 using a different social role in this study. Compared to fifth graders, third graders used fewer products ($M = 4.71$ vs. $M = 3.51$; $F(1, 38) = 2.22$, $p < .02$) and fewer brands ($M = 4.06$ vs. $M = 2.31$; $F(1, 38) = 5.16$, $p < .01$). Compared to fifth graders, seventh graders used more products ($M = 5.76$; $F(1, 38) = 1.70$, $p < .05$) and more brands ($M = 5.31$; $F(1, 38) = 2.70$, $p < .01$). Again, we found that fifth graders made more connections ($M = 6.30$) than did third graders ($M = 5.35$; $F(1, 38) = 1.31$, $p = .10$), and seventh graders made more connections than did fifth graders ($M = 8.55$; $F(1, 38) = 2.23$, $p = .01$), providing additional support for hypothesis 4.

Replicating the cool kid collage, first graders did not differ from third graders on any dimension. Additionally, we found that the tenth graders’ collages had more total elements ($M = 23.56$) than those of seventh graders ($F(1, 38) = 4.93$, $p < .01$) and had more clusters ($M = 3.35$; $F(1, 38) = 3.67$, $p < .01$) and more connections ($M = 17.10$; $F(1, 38) = 6.50$, $p < .01$) than those of seventh graders. We also found that compared to seventh graders, tenth graders used significantly more products ($M = 6.91$; $F(1, 38) = 2.19$, $p < .02$) and brands ($M = 6.81$; $F(1, 38) = 3.00$, $p < .01$).

Comparative Analyses. There were two noteworthy differences between constellations for the cool kid versus those for the quiet kid. First, collages for the quiet kid were

smaller than those for the cool kid at all ages (first graders: 16.06 vs. 19.50; third graders: 15.61 vs. 19.40; fifth graders: 20.91 vs. 25.80; seventh graders: 18.01 vs. 22.05; tenth graders: 23.56 vs. 28.00; all p ’s $< .01$). Second, we found that, across all age groups, children displayed higher consensus percentages for their quiet kid collages than for their cool kid collages (first graders: 19% vs. 10%; third graders: 19% vs. 16%; fifth graders: 24% vs. 19%; seventh graders: 55% vs. 45%; tenth graders: 25% vs. 18%; all p ’s $< .01$). This finding is consistent with Englis and Solomon’s (1995) conclusion that highest consensus should be obtained in constellations associated with an avoidance group (pretests indicated that participants indicated that they wanted to be a “cool kid,” not one “who doesn’t have a lot of friends”).

Discussion

Study 2 replicated and expanded the findings from the pretest and study 1, with full support for all hypotheses and further support for the structure and content of constellations. The results were similar regardless of task (unstructured open-ended task in pretest vs. collage construction in studies 1 and 2) and social role (self-selected role in pretest, cool kid role in study 1, and cool kid vs. quiet kid roles in study 2). We also found that first graders did not differ in any way from third graders but that the tenth graders’ collages were larger and less rigid than those of the seventh graders.

Our studies reveal strong evidence that children make product-brand associations when they define social roles. However, a question that remains unanswered is how accessible these associations are. In study 3, we were interested in testing hypotheses regarding the accessibility of consumption constellations as a function of age. From the research on adult consumption constellations (Lowrey et al. 2001), it is known

that, in addition to differences in structure and content, constellations can also differ in terms of how accessible they are in memory. In particular, aspirational constellations (those associated with a social role that one aspires to) are more accessible than avoidance constellations (those associated with a social role that one does not aspire to). Thus, we expect the cool kid constellation (aspirational) to be more accessible than the quiet kid constellation (avoidance). Also, given what we know about linear age trends in both the understanding of social roles and in level of product knowledge, we anticipate that consumption constellations will be less accessible in younger children, will increase in accessibility for older children, and will become even more accessible by early adolescence. Thus, we hypothesize the following:

- H5:** Consumption constellation accessibility will increase linearly with age. Specifically, the constellations of third graders will be less accessible than those of fifth graders, and the constellations of fifth graders will be less accessible than those of seventh graders.
- H6:** The aspirational constellation will be more accessible than the avoidance constellation for all age groups.

STUDY 3

The purpose of study 3 was to investigate the accessibility of children's consumer-based consumption constellations in memory. In order to do so, we used a reaction time methodology (Fazio 1990; described below) with a between-subjects design.

Method

Pretesting. Interviews were conducted with third, fifth, and seventh graders to determine appropriate elicitation cues and stimuli to ensure that children were familiar with the products and brands to be used as stimuli as well as the descriptions of the target persons (elicitation cues) to be used in the actual study. We also pretested the reaction time task to ensure that children understood instructions and completed the task thoughtfully, which they did. Finally, pretesting also indicated that children within the three grade groups included in this study were able to complete the reaction time task without showing signs of fatigue.

Measure. A computerized reaction time task (Fazio 1990) was utilized, in which participants are presented with a description of a social role and then asked to respond to consumption-related stimuli. The time between presentation of a stimulus and the resulting response (reaction time) was used to measure construct accessibility. Faster reaction times (measured in milliseconds) imply more accessible constructs.

Sample and Procedure. We returned to the original three grade levels to triangulate our knowledge about chil-

dren's constellations. Forty-eight students were recruited from a school in the Midwest: 16 third graders, 16 fifth graders, and 16 seventh graders. Boys and girls were equally represented. The procedure used to gain parental consent was identical to that of the previous studies, and the study was conducted one-on-one with the experimenter on a computer in a controlled environment in an unused classroom. The session lasted no longer than 20 minutes. Participants were first presented with a series of practice trials using unrelated material to familiarize them with the reaction time task to be used in the actual study. Practice trials consisted of presenting the participant with a short description (elicitation cue) of an animal (e.g., This animal has four legs). Following the elicitation cue, an animal name (stimulus) appeared on the screen (e.g., cat), and the participant was asked to respond with a Yes or No as to whether the animal name that appeared on the screen fit the previous description (Yes/No responses were clearly marked on the keyboard). Pressing the space bar continued the procedure by showing another animal description, followed by a new animal name, and so on until all practice trials were complete. This exercise ensured that the participants gained familiarity with the task before the actual study began. The procedure was identical to that of the focal study except for the elicitation cues and stimuli presented.

Once the trial runs were complete, participants were presented with a brief explanation of the focal study. Each participant was given a four-sentence description of a typical child (without any label) they would be familiar with (the elicitation cue), as follows:

Aspirational (Cool Kid): This kid wears cool clothes. This kid listens to cool and popular music. This kid likes to play sports. This kid is funny and has a lot of friends.

OR

Avoidance (Quiet Kid): This kid wears plain clothes. This kid listens to music that is not popular. This kid does not play sports. This kid is quiet and doesn't have a lot of friends.

As in the practice trials, pressing the space bar continued the procedure by showing the next stimulus and asking the participant whether it matched the person in the description. Stimuli represented the categories that emerged in previous studies: products (e.g., computers), brands (e.g., Adidas[®]), personal characteristics (e.g., friendly), and foods (e.g., healthy food), as well as general interests (e.g., listening to classical music, playing sports). This last category was included as a form of manipulation check given the nature of the elicitation cues (recall that the quiet kid listens to music that is not popular and the cool kid likes to play sports). Once a response was made, participants pressed the space bar, a new elicitation cue was presented, followed by a new stimulus, and so on. The time between the stimulus presentation and the Yes/No response (i.e., the reaction time, measured in milliseconds) served as the dependent variable. The study repeated itself until participants completed all trials.

Presentation of stimuli was completely randomized. Note that the elicitation cues consisted of unbranded interests/activities only. Pretesting determined that this did the best job of eliciting a particular type of individual among participants for this task. Stimuli included branded products and retail brands in addition to unbranded items. Actual responses (Yes/No) and reaction times were recorded.

Results

Preliminary Analyses. To rule out the possibility that age differences found were a spurious function of developmental differences in the ability to complete the computerized reaction time task, average reaction times for the practice trials were analyzed by grade level. No significant differences were obtained ($F(2,47) = 1.69$; $p = .20$). Thus, age did not affect the ability to complete the task. Additionally, to ensure that our stimuli were responded to as intended (Yes, when the elicitation cue and stimuli matched; No, when they did not match), we conducted a manipulation check. For stimuli associated with the aspirational role, 89% of responses were as expected. For stimuli associated with the avoidance role, only 50% of responses were as expected. This was due to the K-MartTM stimulus, which 94% of the participants responded to unexpectedly (i.e., as a cool brand). This might have been caused by a new “hip” advertising campaign that launched just prior to our study but after our pretest. Thus, this stimulus was dropped from further analysis, leading to an increase to 75% of responses as expected. Average reaction times were also analyzed to check for gender differences. No gender differences were obtained ($F(1,46) = 2.21$, $p = .14$).

Reaction Times. Reciprocals of all reaction times were computed to normalize the data (Fazio 1990). A 2 (aspirational vs. avoidance elicitation cue) $\times$ 2 (aspirational vs. avoidance stimuli) $\times$ 3 (grade level) ANOVA was conducted. We expected that older children would respond more quickly than younger children due to developmental differences (hypothesis 5). Planned comparisons confirmed the main effect of grade level: seventh graders exhibited faster reaction times ($M = 2,788$ milliseconds) than did fifth graders ($M = 3,824$ milliseconds; $t(1,31) = 15.40$, $p = .000$), and fifth graders exhibited faster reaction times ($M = 3,824$ milliseconds) than did third graders ($M = 4,502$ milliseconds; $t(1,31) = 15.28$, $p = .000$).

We also expected that the aspirational constellation would be more accessible than the avoidance constellation (hypothesis 6). There was a main effect for stimulus (see table 6), such that aspirational stimuli yielded faster reaction times than did avoidance stimuli ($F(1,46) = 22.09$, $p < .01$). For aspirational stimuli compared with avoidance stimuli, participants were faster to respond with the appropriate Yes (i.e., matches = 2,229 vs. 4,097) or the appropriate No (i.e., nonmatches = 3,521 vs. 4,961), depending on which elicitation cue (aspirational vs. avoidance) was presented. This finding supports hypothesis 6 in that it suggests that the

TABLE 6

STUDY 3: MEAN REACTION TIMES ACROSS ALL AGES
FOR ASPIRATIONAL VERSUS AVOIDANCE CONSTELLATION
(IN MILLISECONDS)

	Aspirational stimuli	Avoidance stimuli
Aspirational elicitation cues	2,229	3,521
Avoidance elicitation cues	4,961	4,097

NOTE.—“Yes” responses include matches (aspirational elicitation cues/aspirational stimuli [2,229] and avoidance elicitation cues/avoidance stimuli [4,097]). “No” responses include nonmatches (aspirational elicitation cues/avoidance stimuli [3,521] and avoidance elicitation cues/aspirational stimuli [4,961]).

aspirational role is more accessible than the avoidance role. There were no interactions.

In summary, our results support hypothesis 5. Third graders’ reaction times were slower than fifth graders’, and fifth graders’ reaction times were slower than seventh graders’. These results suggest that the accessibility of consumption constellations increases with age. Our results also support hypothesis 6. Across all age groups, aspirational constellations were more accessible than avoidance constellations.

GENERAL DISCUSSION

The emerging view from our research is that children as young as age 5 are capable of forming consumption constellations. Little developmental change in constellations takes place between first grade and third grade. From third grade on, changes occur but not in a clear linear fashion as most would predict given the linear age trend in product knowledge and social role experience. Specifically, from third grade to fifth grade, constellations increase in size, flexibility, degree of symbolic complementarity, and accessibility from memory. From fifth grade to seventh grade, however, we observe a different pattern. Compared to those of fifth graders, seventh graders’ constellations are smaller and less flexible, despite containing more products and brands. Seventh graders, however, do form constellations that are more symbolically complementary and more accessible. Finally, our findings indicate that the rigidity shown in seventh graders’ constellations decreases by tenth grade. It is important to note that the developmental patterns observed in this research apply to self-relevant (i.e., aspirational and avoidant) roles. Because participants in this research fall within the age range experiencing developmental changes such as identity development and increasing social awareness, they are likely to respond to consumption constellation elements that are self-relevant (and may have social consequences) differently from those that are not self-relevant (and may not have social consequences). Therefore, it is possible that a different developmental pattern may emerge for other familiar roles that are less self-relevant, such as mom, teacher, or coach.

Our nonlinear age findings suggest that children’s increasing knowledge and experience can only partially explain the developmental changes observed in children’s con-

sumption constellations. It is likely that age differences in constellations are due not only to increasing knowledge and experience with products and brands but also to developmental changes in children's stereotypes of social roles. By seventh grade, early adolescents' stereotypes become stronger and more rigid. Due to this rigidity, individuals are less likely to incorporate nuances into their definitions of social roles, resulting in smaller constellations that represent fewer dimensions of a social role. By tenth grade, adolescents become less rigid in their stereotyping and define social roles in multidimensional ways. This change is evident in the increase in constellation size, number of clusters, and number of connections (see fig. 2). Interestingly, age differences in symbolic complementarity between seventh graders and tenth graders existed in structure, not degree. Because of their rigid stereotypes of social roles, seventh graders tend to form constellations with fewer clusters of highly complementary elements than do their younger and older counterparts. In contrast, because of their less rigid stereotypes, tenth graders tend to form constellations that incorporate multiple definitions of a social role, thus giving the impression that elements in the constellations are less complementary (e.g., a cool kid can be quiet or loud). However, upon closer examination of individual clusters, we observe that each cluster in the constellation consists of elements that are highly complementary.

Our results can be explained by a broader range of developmental theories. The documented changes can be linked to similar social-cognitive developments that represent Erikson's and Piaget's theories. In stage 4 (ages 5–11) of Erikson's Stages of Psychosocial Development, through increased social interactions, children begin to develop a sense of pride in their accomplishments and abilities, not only in interacting with others but also in their independence. This may explain why, in our studies, children in this age range are open to describing a social role in multidimensional ways. In stage 5, during adolescence, children are developing a sense of self. Combined with a heightened sense of social awareness, early adolescents are likely to be rigid in their thinking, and this could be why in our studies seventh graders' constellations are most rigid. As they grow older, adolescents are likely to become more successful at thinking of different ways to define themselves, and this may explain why we see more flexibility in tenth graders' constellations.

Piaget's Theory of Development can also explain our pattern of findings. Specifically, in the formal operational stage, early adolescents are believed to be bound by a rigid sense of order or sequential thinking that prohibits alternative solution development or limits their creative processes. This helps us understand why, in our studies, we find that fifth graders have larger and more flexible constellations than seventh graders. Further, according to Piaget, successful completion of the formal operational stage is evidenced by appreciation for dissenting views, creative viewpoints, and a confidence in one's differences from the mainstream. This helps explain why, by tenth grade, adolescents'

constellations include more clusters and more elements than those of seventh graders.

Our findings are also interesting from a consumer values perspective. Specifically, the changes observed here can be linked to research on children's materialism. In a study with 8–18-year-olds, Chaplin and John (2007) found that adolescents were highly materialistic. Similarly, in our research, adolescents were more focused on material goods (i.e., products and brands) when creating their consumption constellations than were their younger counterparts.

Contributions

Our research makes several contributions. First, we draw upon the literature on children's knowledge of stereotyping, role schemas, and consumption symbolism to provide the first conceptual framework to understand the development of consumer-based consumption constellations. Our conceptual framework allows parents and educators to better understand how milestones in children's development, such as their understanding of stereotypes, role schemas, and consumption symbolism, can help to explain why products and brands may be more socially important at certain ages than others. Given the escalating concern over children's fixation on acquiring material goods and little empirical evidence to contribute to an informed discussion of why products and brands play such a pivotal role in children's lives, it is important for researchers to explore a variety of functions that products and brands serve for children. We argue that an important social function that products and brands serve is to help children learn about, define, and enact social roles as they become increasingly socially aware and impressionable.

Second, we used three different methodologies with over 250 children and adolescents (ages 5–16) to test our predictions and to provide converging empirical evidence of age differences in children's consumer-based consumption constellations. The open-ended task provided a good way to elicit not only the preconceived categories used in the literature (i.e., products and brands) but also other image-rich categories (e.g., personality, demographics) that add to the complex and multidimensional nature of consumer-based consumption constellations. The task also gave us confidence in the fact that even young children can discuss constellations without being prompted to think about products and brands. By following Chaplin and John's (2005) collage methodology, which does not rely on retrieval and verbalization skills, we were able to make it easier for younger children to express constellations that exist in their memory. It also allowed us to make age comparisons because all participants described the same social role and were provided with the same set of stimuli. Our reaction time task provided another glimpse into how constellations are structured in memory across ages. Age differences are important to document because they show that consumption constellations develop along with social-cognitive changes that occur from childhood through adolescence.

Third, our research adds to the emerging body of research

on children's consumption symbolism by examining children's understanding of groups of product and brand symbols, as opposed to studying products or brands in isolation. With cross-promotional advertising targeted toward children exploding in the past decade (Kunkel et al. 2004), it is surprising that little empirical evidence exists to provide guidance on if and when children understand that marketers try to promote their products by tapping into and influencing consumer-based consumption constellations, thereby influencing how they define and enact social roles. Our examination of children's consumer-based consumption constellations provides valuable insights into not only why material things may be so important to children (i.e., to help them define and enact social roles) but also how children's knowledge of consumption symbolism can lead to stereotypes and feelings of prejudice.

Finally, we augment the existing literature by introducing the term *consumer-based consumption constellations*—we distinguish this term from the general consumption constellations term currently used by including descriptive categories such as personality traits, demographics, and psychographics in addition to the categories of products and brands to capture the full scope of constellations. Although the construct of consumption constellations began as a term that inherently weaves together products and brands with what they symbolically communicate about individuals, research has evolved to narrowly focus only on products and brands and has not incorporated other image-rich descriptions that are used by consumers to describe social roles. In this research, we bring the study of consumption constellations back to its roots and provide a richer understanding of consumption constellations from the consumer's perspective.

Limitations

There are several limitations to this research that we would like to note. First, although our findings showed initial support for seventh graders having rigid stereotypes (resulting in constellations with fewer elements and fewer clusters), there may be age differences in the reliability of clusters formed. Therefore, more work is needed before we can fully support this contention. Second, although we operationalize clusters as three or more elements linked together (and found similar age differences regardless of whether we operationalized clusters as two or three elements), it is possible that, for a different type of social role (e.g., a less salient, more distant role), it may be more appropriate to operationalize a cluster as at least two or more elements linked together to fully capture different views of the social role.

There are also limitations pertaining to our measures. Although we used interviews as a way to further understand age differences, interviews are not a perfect assessment tool, as younger children may see connections that they may not necessarily be able to articulate during an interview. Additionally, although the collage method did not rely on retrieval skills in order to make fair age comparisons, it may

have prompted children with ideas that they might not have otherwise thought of to describe a social role.

Finally, our findings may be more valid for certain roles than for others because the theory we present is focused on the value of oversimplification to help avoid mistakes in enacting social roles. However, when children are more of an observer of a distant social role (e.g., President, doctor, coach) than a participant, how might their constellations be similar or different from what we observed in this research? In other words, different processes may be relevant to more distant/less familiar roles. Although we have initial evidence of the generalizability of our results across two very different social roles, more research is warranted before we can make conclusions about children's perceptions of a wide range of other roles, from doctors and teachers to dance teachers and baseball coaches, and even to more distal roles such as farmers and soldiers.

Future Research

There are several avenues for future research. First, it would be fruitful to study younger and older age groups. Although our findings reveal that children as young as age 5 can form consumption constellations, the question of when this ability begins is still unclear. Are preschoolers able to form even simpler constellations than first graders? Moreover, given that the constellations of tenth graders are larger and more complex than those of seventh graders, does this trend hold true as age increases, or do individuals hit a plateau where constellations stabilize in size and complexity? Second, although we did not detect any gender differences, this issue is worthy of further investigation because girls are known to mature socially at an earlier age than boys (Cohn 1991). Third, given our initial investigation into the degree of rigidity of children's consumption constellations, as well as the accessibility of different social roles for children, it would be interesting to examine whether there is a relationship between accessibility and degree of rigidity of social roles. In other words, if a cool kid stereotype is more accessible than a quiet kid stereotype, does this mean that the cool kid stereotype is also more rigidly held?

Fourth, children can learn about consumption constellations from a variety of sources, including the Internet, TV, video games, parents, peers, teachers, coaches, celebrities, and books. Research that addresses how the media and interpersonal influences might contribute to the content of children's constellations would be an interesting avenue for future research. For example, do heavy TV viewers tend to share constellations? Finally, our findings point to a possible link between age differences in children's consumer-based consumption constellations and age differences in values such as materialism and brand consciousness. A study by Chaplin and John (2007) suggests that materialism increases as children move into adolescence. In our studies, adolescents included the most products and brands in their constellations. Therefore, it is possible that children who are more savvy in using products and brands to define and enact social roles are also those who tend to be more materialistic

and brand conscious (or vice versa). Given the increasing concern over escalating trends in these values among children, it would be interesting to examine how a focus on complementary products and brands to define and enact social roles at different ages may be related to varying levels of materialism and brand consciousness.

In conclusion, more research is needed in the area of children's consumer knowledge of the symbolic complementarity of groups of products and brands. A particularly well-suited context to study this phenomenon is children's consumer-based consumption constellations. The widely accepted notion that products are not consumed in a vacuum and that individuals learn over time that certain products go together (e.g., suit and tie; fine dining and expensive dinnerware) or are incongruent (e.g., a soccer player in game uniform drinking coffee; Douglas and Isherwood 1979) underscores the need for more research in this area.

Over the past 2 decades, the degree to which marketers have scaled up efforts to reach children is remarkable. In 1983, marketers spent \$100 million on television advertising to kids. They now spend roughly 150 times that amount in a variety of media that seek to infiltrate every aspect of children's lives (Schor 2004). Our research on children's consumer-based consumption constellations sheds light on how these diverse marketing cues are received by children and how consumer values such as brand consciousness and materialism may be developing (perhaps concurrently) with children's developing constellations. It should also help parents, educators, and other concerned constituents understand how marketers' increasingly popular cross-promotional tactics affect children's knowledge of social roles, which can lead to stereotypes and feelings of prejudice that they may carry into adulthood.

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