
Original Article

Dimensions of the dog–human relationship: A segmentation approach

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ABSTRACT Previous research on dog–human companionship shows that there are multiple dimensions characterizing the relationship between dogs and their owners. The purpose of this research is to identify key consumer behavior-based segments and show how such dimensions of dog–human companionship vary across these segments. A two-stage research design was employed utilizing 75 in-depth interviews, and a resultant survey of 745 US dog owners. Cluster analysis using shopping-related variables produced three distinct segments of dog owners. Results show that how people shop for their dogs is systematically related to the nature of their relationships with their dogs. These results add to the literature on dog-related consumer behavior and provide practitioners with a more detailed perspective on targeting dog owners.

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INTRODUCTION

Seventy-three million American households, or approximately two-thirds of the total, have one or more pets, with dogs being present in 39 per cent of all US homes. That amounts to 78.2 million owned dogs in America.¹ Animal owners

cite companionship and love as their chief reasons for having a pet, but dog owners increasingly mention stress relief and exercise, such as walking or jogging with their dogs, as benefits of ownership.² In general, during the last decade American dog owners have become more involved than ever with their dogs. In hard times people are looking to their dogs for comfort and unconditional love; the worse they feel, the more they cherish their pets.³ (As much of the research cited in this article deals with the pet market in

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general, and not just the dog market specifically, we are careful to distinguish between the two markets, and try to keep the focus on the dog market.)

Changes in how humans meet their needs (owing to shifts in technology, the economy and cultural norms) may shape the type of relationships people share with their dogs. Dogs fill a variety of needs in people's lives, moving increasingly toward being more full partners in genuine social relationships.⁴ Previous research on dog-human companionship shows that there are multiple dimensions characterizing the relationship between dogs and their owners.⁵ The purpose of this research is to conduct a segmentation study of dog owners to first identify key consumer behavior segments, and then to see how previously identified dimensions of dog-human companionship vary across these segments.

LITERATURE REVIEW

The dog-human bond and dogs as extensions of self

In present US society, dogs play an increasingly important role in meeting human needs for companionship, friendship, unconditional love and affection. The more disconnected we become from each other, the deeper are the bonds that we form with our pets.⁶ In addition, dog owners are more likely to anthropomorphize their pets than are cat owners.⁷ In fact, a recent study finds that dog owners buy for their dogs in ways similar to how they buy for themselves.⁸ The close dog-human connection is also related to the fact that the average dog has roughly the intelligence equivalent to a 2-year-old child,⁶ so that having a dog in the home is like having an enduring bond with a young child.

Pets can also serve as extensions of self and help their owners form their identities.⁹ People's highly personal relationships with their dogs are non-replaceable, and they grieve and experience a loss of self when a pet is lost. In a later study, Belk further suggests that pet ownership presents the wild, dirty, messy and chaotic aspects of animals in contrast with the tame, clean, orderly human condition. Belk concludes that pets

represent a divided sense of self that reflects the way folks perceive themselves in today's world.¹⁰ Another recent study illustrates how pet owners use pet-related consumption to form their personal, social and emotional identities.¹¹ The dynamics of animal companionship 'appear to go far beyond the confines of anything that we might normally associate with material possessions Consumers bond with their animal companions in ways that resemble human relationships ... and share a deep awareness that their relationship with one or more animal companions is an end in itself.'¹²

Dog-related shopping behavior

The increased devotion to pets in the United States translates into several major trends in the pet-related market, such as a continuing increase in pet-related spending.¹³ This trend has persisted even through the most recent recession, with total expenditures on pets in the United States totaling US\$48.35 billion in 2010.¹⁴ 'Although the economy has been a major factor for many industries, the pet industry continues to see unprecedented growth', said APPMA President Bob Vetere. In many households, 'Pets have become the first child', says pet industry analyst R.J. Hottovy, explaining why even in tough economic times, spending on our animals continues to climb.³

Stimulating the growth in all pet-related markets is an ongoing psychographic trend referred to as 'humanization' or anthropomorphism, whereby pets are increasingly being treated like members of the family. Supporting the growing pet-as-family trend is heavy advertising encouraging the deep attachment Americans feel for their pets, positioning on themes like lifetime pet care and increased interaction and intimacy between humans and pets. For example, a recent television advertisement for the super premium dog food Blue Buffalo states, 'When you love them like family you want to treat them like family'. This trend reflects the strategy of many marketers to strike an emotional chord with pet owners, who are thinking in human terms as they shop and are applying their own preferences to the pet

products they select. This greater attention to pets' diet and health leads in turn to longer lifespans for companion animals and even deeper emotional attachments.¹⁵

Segmentation in the dog/pet market

The underlying principle of market segmentation is that heterogeneity in preferences and buying behavior can be effectively managed by grouping similar customers into segments, some of which become the focus for marketing efforts, resulting in greater customer orientation and marketing plans more attuned to customer needs.¹⁶ There are many segmentation approaches, even one that compares dog owners to cat owners.¹⁷ It has been demonstrated that psychographic/lifestyle segmentation based on values leads to clearer market differentiation than basic demographic segmentation.¹⁸ This is especially true in the market for dog-related products. 'The expectation of suppliers of pet and pet-related products is no less exacting than dog owners' expectations and experience of their dogs. The relationship between dog and dog owner is an aspect of consumer behavior that explicates the need for businesses to match pet and pet-related products through values rather than slogans and glossy programs'.¹⁹

The internal forces that cause people to seek out products and make purchases (that is, buying motives) are based on a specific state of being that is desired.²⁰ Thus if the state of being that is desired is a close relationship, then the kinds of benefits sought from products for our pets will correspond. In addition, it has been found that the physical proximity between the pet and the consumer may positively reflect the consumer's emotional attachment to the pet.²¹ Thus as certain American dog owners spend more time with their dogs, so does their emotional attachment grow, and therefore their desire to express that attachment through spoiling their dogs.

Especially among aging baby boomers, empty nesters, DINKs (dual-income/no kids) and singles, this trend is fueling consumer demand for premium products and services, especially those offering time-saving convenience. US pet owners are spending more on their pets, but not as much

as they would if they had the right products available. More retailers are attempting to bridge this gap by offering pet-related products via non-traditional channels. For example, Nordstrom offers fashionable Kate Spade pet carriers; Kohls offers Paws To Refresh disposable pet wipes; Home Depot offers pet stow-away car seats and travel beds; Orvis.com offers an extensive selection of high-end pet gear; and Sports Authority and Dicks Sporting Goods offer recreational dog products including water bottles, protective leather boots and life jackets.¹⁵ More and more companies traditionally known for human products, such as Paul Mitchell, Omaha Steaks, Harley Davidson and Old Navy, are now offering lines of pet products ranging from dog shampoo, pet attire and name-brand toys to gourmet treats and food.

The growth in the dog-related market is largely because of the high-end segment, with trends like personalization, high tech, fashion and human-grade. In fact, the entire pet industry growth is being driven by high-income earners. In 2005, consumers who earned \$70 000 or more represented 51 per cent of total pet-related spending, up 28 per cent from 1995.²² Among many (if not most) of today's pet product marketers, there is no longer any question that many consumers are willing to pay significantly more for products capable of enhancing their relationship with their pets while also making pet care more fun and convenient.¹⁵ For example, from 2002 to 2006, the number of pet convenience product lines specifically positioned as 'upscale' increased sixfold from 7 to 41, according to Datamonitor's Product Scan Online service. This signifies the success of marketers in tapping into pet owners' desire to pamper their pets by providing them with the best products available, in line with what Packaged Facts dubbed the most important pet market trend of 2006 – 'functional pampering' – which by all measures is still going strong.¹⁵

Different segments shop in different types of outlets.¹⁴ That Americans in general are working longer hours, making longer commutes, and generally pressed for time is no secret, and US pet owners are no exception, with pet care

adding to their list of daily ‘must-dos’. For conscientious pet owners, feeding, walking, grooming and giving attention and play time to pets each day requires a significant time commitment, making them especially receptive to products designed to lend a helping hand. For these same reasons, some of the busiest pet-owning demographics – including working singles, aging baby boomers and DINK couples – are often also tried-and-true purchasers of premium pet products who are more than happy to shell out big bucks for time-saving convenience. As Bob Vetere, president of the American Pet Products Manufacturers Association (APPMA), told *Pet Age* (November 2006), ‘People are busier and more active, but they still love the emotional benefit of having a pet. So they want products that allow them more freedom, yet still keep the pet healthy and happy. For many folks, because of their work schedules and busy lives, they need convenience products in order to continue owning pets, so automation is huge’. In mass-market outlets, the only factor more important than convenience is price.¹³

METHOD

In-depth interviews

Approximately, 75 in-depth interviews were conducted with ‘highly involved’ dog owners. The purpose of these interviews was to obtain qualitative information regarding dog owners’ relationship with their dogs. A series of questions solicited information regarding owners’ daily interaction with their dogs, general lifestyle issues and values, and spending patterns.

In terms of their daily interactions with their dogs, several common behavior patterns were reported by informants. Most households began their day with a morning walk, followed by breakfast. Then dogs with working companions were placed in their crates or runs, or were allowed free run of the home. Dogs with stay-at-home companions were allowed to enjoy continuous interaction with their ‘pet parents’.

A similar pattern emerged for all of our interviewees regarding dog–family interaction in the evenings. Whereas one ‘pet parent’ chose to

feed their dog in the late afternoon, the rest of the interviewees fed their dogs *before* preparing their meal. Following dinner, the dogs socialized with their respective families either on the couch, on the dog bed or on the floor while the humans watched television or read. Upon retiring for the night, many of the ‘pet parents’ shared the bed with their ‘fur babies’ while other dogs slept on the floor or dog bed beside the bed. None of the people in these interviews allowed their dogs to sleep out of doors.

All of the people who participated in this in-depth interview perceived their dogs as part of the family. All of the dogs have been assigned the role of peer or child, with younger respondents viewing their dogs as siblings/ playmates. Several older empty nester respondents viewed their dogs as replacements for their grown children. Both groups appreciated the ‘companionship and love’ that emerges from their relationship with their dogs.

As one might expect, informants reported spending a considerable amount of money on their dogs. For most, the top expenditure was dog food. There was significant variation in brands used. Many brand decisions were based upon recommendations from veterinarians whereas others were based upon individual research. Another intermittent and often big expense was to pay for their dogs’ health care. One individual spent \$5000 for hip replacement surgery whereas another spent \$7000 for chemotherapy. Most participants reported giving their dogs treats and toys fairly regularly. Some gave treats because of their perceived healthfulness, whereas others gave treats as an aid in obedience training. Toys were provided regularly, especially for young pups as a deterrent from chewing shoes and furniture. Although all respondents expressed distaste for extravagant spending, they reported annual expenditures on their dogs ranging from \$3000 to \$10 000. This is quite a bit higher than the national average of approximately \$1000 per year spent per dog in the typical dog-owning household in the United States,²³ indicating that higher involvement with one’s dog leads to higher dog-related spending.

Questionnaire

Questionnaire items were developed based on the above in-depth interviews as well as on dimensions of the dog–human relationship identified in previous research.⁵ Items were designed to measure characteristics of the dog–human relationship, dog-related behaviors and attitudes, as well as dog-related shopping behaviors. The survey consisted of 44 such statements measured on a five-point Likert scale, classification questions designed to shed light on dog-related behaviors in the household, as well as standard demographic measures.

The sample

The sample for this study was drawn via an online referral method. Specifically, a preliminary group of known dog owners, residing primarily in the southeastern United States, were contacted and asked to complete the survey. They were further asked to send the survey via e-mail to five of their dog-owning friends. This process resulted in 745 usable completed surveys.

The demographic characteristics of the sample are as follows: 59 per cent of the sample is female and 39 per cent is male. A majority of the sample (61.5 per cent) is married. The age distribution is as follows: 32.4 per cent between the ages of 21 and 30; 17.8 per cent over 30 up to 45; 44.7 per cent between the ages of 45 and 64; and 2.8 per cent 65 years or older. Household incomes are distributed toward the high end with those earning less than \$40 000 comprising 21.5 per cent of the sample, those earning \$40 000–\$75 000 comprising 20.6 per cent, those earning \$75 000–\$100 000 comprising 17.5 per cent, those earning \$100 000–\$150 000 comprising 15.8 per cent, and those earning over \$150 000 comprising 17.5 per cent. The sample is highly educated with 7.3 per cent of the sample having only a high school degree, 21.9 per cent having some college, 47.1 per cent having earned a college degree and 21.5 per cent having earned a graduate or professional degree. This sample is therefore wealthier and more educated than the average US household. The median number of years that respondents in this sample have owned

dogs is 23. The average household in this sample currently owns 1.4 dogs.

Development of independent grouping variable using cluster analysis

Shopping-related variables focusing on the effort and money that consumers are willing to spend on their dogs were used to develop the independent grouping variable for this study. This fits into the framework for studying the animal companion life cycle that Aylesworth *et al* suggest,²⁴ focusing specifically on the acquisition stage. These variables transcend demographics and provide the basis for a richer, more strategy-oriented segmentation scheme. In addition, this segmentation approach mirrors how marketing practitioners currently target pet owners based on their shopping behaviors in the marketplace. These variables measure more than just different spending amounts, but what dog owners are willing to buy for their dogs as well as how much influence their relationships with their dogs have on their consumer behavior. A cluster analysis was performed using the eight shopping-related behavioral variables depicted in Table 1, which also shows the three-cluster solution that was produced by the analysis. Three distinct groups of dog owners are defined by this cluster solution, and are described below. These groups are then compared based on dimensions of their relationships with their dogs.

Strongly Attached Owners ($N=204$). Dog owners who are members of the first cluster or segment agree more strongly with each of the eight variables significantly more than do members of the other two clusters. They believe strongly that price is no object when it comes to their dogs and spend lots of money on special products. Respondents comprising this cluster are so strongly attached to their dogs that their choice of vehicle as well as their home setup is affected by their dogs. Their strong attachment to their dogs is further evidenced by their purchasing gifts and spending a premium on healthy food for their dogs, as well as making frequent visits to their veterinarians.

Moderately Attached Owners ($N=387$). Dog owners comprising this cluster or segment agree

Table 1: Cluster solution with shopping-related behavioral variables

<i>Behavioral variables</i>	<i>Cluster 1: Strongly attached owners</i>	<i>Cluster 2: Moderately attached owners</i>	<i>Cluster 3: basic owners</i>	<i>F-value</i>	<i>Significance</i>
Price is no object when it comes to taking care of my dogs	4.06	2.85	1.85	292.36	0.000
I spend a lot of money on my dogs	4.19	3.21	2.09	317.13	0.000
I find special products for my dogs	4.16	3.19	1.87	383.20	0.000
Owning a dog has affected the setup of my home	4.11	3.22	2.59	96.01	0.000
Owning a dog has affected my choice of vehicles	3.55	2.19	1.80	178.32	0.000
I like to buy gifts for my dog	4.01	3.41	2.15	209.86	0.000
I purchase the healthiest food for my dogs regardless of price	4.03	3.21	2.13	197.74	0.000
I take my dogs to the vet regularly	4.44	4.27	3.27	125.94	0.000

with most of the dog-related variables; however, they do not agree that price is no object or that their dogs influence their choice of vehicles. Further, their levels of agreement are not as strong as those in the first cluster.

Basic Owners ($N=158$). Dog owners in this cluster or segment disagree with most of the statements, except that they do take their dogs to the vet regularly. It appears that people comprising this cluster are only concerned with meeting their dog’s basic needs.

RESULTS

Development of dependent variables using factor analysis

A principal components factor analysis was performed using the remaining 36 dog–human relationship variables. Factor loadings in Table 2 were generated by using Varimax rotation for ease of interpretation. The six-factor solution accounts for 53.14 per cent of total variance in the data. The following criteria were used to determine which items should be retained in the final solution: a cut-off value of 1.0 for Eigen values, a cut-off point of 0.40 for factor loadings and a careful consideration of an item’s contribution to the interpretation of factor meaning. Items that exhibited high loadings (> 0.400) on two or more factors were excluded as well. As a result, eight items were eliminated from further consideration and the remaining 28 items were retained in the final solution. The six factors represent dimensions of the dog–human

relationship, and include Dog-Oriented Lifestyle (10 items), Anthropomorphism (seven items), Structure and Discipline (three items), Utility-Oriented (two items), Boundaries/Physical Proximity (three items) and Appearance (two items).

Coefficient α scores were calculated to assess the internal consistency of the items that make up each factor. The coefficient α scores of three of the factors are above 0.70, a cut-off point suggested by Nunnally as good enough for any type of research.²⁵ The coefficient α scores of the remaining three factors are above 0.60, an acceptable internal consistency level for measures used in exploratory research.²⁵ An average sum score for each factor was calculated by averaging the ratings of the corresponding individual items and then used in subsequent analyses.

COMPARISONS OF FACTORS AND INDIVIDUAL ITEMS ACROSS CLUSTERS

The dependent variables representing dimensions of dog–human companionship resulting from the factor analysis are described below and compared across the three different dog-owning segments using one-way ANOVA.

Dog-Oriented Lifestyle Factor. Accounting for the largest proportion of the variance in the data, this factor consists of items that reflect the centrality of dog ownership to one’s lifestyle such as playing with one’s dog(s), taking one’s dog(s) to outings, making sacrifices for one’s dog(s), living an active lifestyle, believing that one’s dog(s) keep him/her young, seeing one’s dog(s)

Table 2: Factor solution with item loadings and reliability coefficients

Items	Dog-oriented lifestyle	Anthropomorphism	Structure and discipline	Utility-oriented	Companionship boundaries	Appearance
	$\alpha=0.884$	$\alpha=0.853$	$\alpha=0.600$	$\alpha=0.763$	$\alpha=0.689$	$\alpha=0.654$
Keeps me young	0.452	—	—	—	—	—
Part of the family	0.703	—	—	—	—	—
For companionship	0.489	—	—	—	—	—
Emotionally attached	0.675	—	—	—	—	—
Play with my dogs	0.622	—	—	—	—	—
Go on outings	0.500	—	—	—	—	—
Part of my lifestyle	0.596	—	—	—	—	—
Give my dogs treats	0.597	—	—	—	—	—
Active lifestyle	0.493	—	—	—	—	—
Willing to make sacrifices	0.619	—	—	—	—	—
Psychological well-being	0.679	—	—	—	—	—
Treat my dog as a person	—	0.715	—	—	—	—
Dog is my best friend	—	0.734	—	—	—	—
Like a child to me	—	0.662	—	—	—	—
Is a lot like me	—	0.616	—	—	—	—
Parental responsibilities	—	0.455	—	—	—	—
Spoil	—	0.546	—	—	—	—
Celebrate my dog's birthday	—	0.515	—	—	—	—
Exercise more	—	—	0.566	—	—	—
Spend time training	—	—	0.711	—	—	—
Lots of rules for my dog	—	—	0.620	—	—	—
For protection	—	—	—	0.813	—	—
Watch dog	—	—	—	0.838	—	—
Dogs on the bed	—	—	—	—	0.565	—
Anywhere in the house	—	—	—	—	0.645	—
Like to travel with	—	—	—	—	0.549	—
Dogs look cool	—	—	—	—	—	0.784
Looks	—	—	—	—	—	0.753
Variance explained (%)	29.1	8.0	5.5	4.0	3.5	3.1

as a companion, being emotionally attached to one's dog(s) and seeing one's dog(s) as an integral part of one's lifestyle and family. Ratings on all 10 individual items as well as on the overall factor exhibit significant differences across all three clusters. Strongly Attached Owners have the highest scores, whereas Basic Owners have the lowest scores, as shown in Table 3.

Anthropomorphism Factor. This factor reveals the extent to which dog owners attribute human characteristics to their dogs and treat them as members of their family. Ratings on all eight questions show that Strongly Attached dog owners attribute human characteristics to their dogs whereas Basic Owners do not, and Moderately Attached Owners are in the middle (see Table 4). More specifically, Strongly Attached Owners tend to treat their dogs as people, see their dogs as children and themselves as their pet parents, like to spoil their dogs and

celebrate their dog's birthday. They also see their dogs as their best friends and believe that their dogs, if they were human, would be like them.

Structure and Discipline Factor. This factor captures the effect of dog ownership on the discipline of both owner and dog. All three segments differ significantly from each other with the same pattern as above, both on the overall factor and on each of the individual items (see Table 5). Strongly Attached Owners agree more that their dogs force them to exercise, that they routinely spend time training their dogs and that they have lots of rules for their dogs to follow.

Utility-Oriented Factor. This factor reflects a dog owner's view of one of the key roles dogs have been expected to serve as part of the human–dog relationship, namely as protectors. As Table 6 shows, dog owners in all three segments do not differ on this factor. US dog owners no longer acquire their dogs primarily in order to gain protection.

Table 3: Comparing the means of Dog-Oriented Lifestyle variables across clusters

	<i>Strongly attached owners</i>	<i>Moderately attached owners</i>	<i>Basic owners</i>	<i>Significance level</i>
<i>Dog-Oriented Lifestyle variables</i>	4.32	3.95	3.29	0.000
My dog keeps me young	4.82	4.58	3.88	0.000
My dog is part of the family	4.82	4.58	3.94	0.000
The main reason I own a dog is for companionship	4.06	3.70	2.96	0.000
I feel emotionally attached to my dog	4.78	4.51	3.78	0.000
I play with my dog frequently	4.41	4.07	3.50	0.000
I like to go on outings with my dog	4.17	3.73	3.01	0.000
My dog is an integral part of my lifestyle	4.37	3.76	2.91	0.000
I regularly give my dog treats	4.44	3.96	3.44	0.000
I live an active lifestyle	4.01	3.90	3.60	0.000
I am willing to make sacrifices for my dog	4.11	3.64	2.85	0.000

Table 4: Comparing the means of Anthropomorphism variables across clusters

	<i>Strongly attached owners</i>	<i>Moderately attached owners</i>	<i>Basic owners</i>	<i>Significance level</i>
<i>Anthropomorphism variables</i>	3.97	3.38	2.56	0.000
I treat my dog as a person	4.22	3.59	2.82	0.000
My dog is my best friend	3.82	3.32	2.52	0.000
My dog is like a child to me	4.22	3.52	2.48	0.000
If my dog were a person, they would be a lot like me	3.69	3.15	2.56	0.000
I have the same responsibilities as a parent when it comes to taking care of my dog	4.12	3.52	2.75	0.000
I like to spoil my dog	4.28	3.66	2.77	0.000
I like to celebrate my dog's birthday	3.44	2.93	2.03	0.000

Table 5: Comparing the means for the Structure and Discipline variables across clusters

	<i>Strongly attached owners</i>	<i>Moderately attached owners</i>	<i>Basic owners</i>	<i>Significance level</i>
<i>Structure and Discipline variables</i>	3.42	3.07	2.51	0.000
My dog forces me to exercise more	3.75	3.34	2.54	0.000
I routinely spend time training my dog	3.39	2.97	2.37	0.000
I have lots of rules for my dog to follow	3.13	2.92	2.65	0.000

Table 6: Comparing the means for the Utility-Oriented factor across clusters

	<i>Strongly attached owners</i>	<i>Moderately attached owners</i>	<i>Basic owners</i>	<i>Significance levels</i>
<i>Utility-Oriented variables</i>	2.05	2.03	2.14	0.287
The primary reason I own a dog is for protection	2.39	2.33	2.38	0.709
My dog is primarily a watch dog	1.97	2.06	2.25	0.015

Boundaries/Physical Proximity Factor. This factor represents the extent to which dog owners want to be near and with their dogs. Strongly Attached Owners, Moderately Attached Owners and Basic Owners exhibit significant differences, as can be seen in Table 7. Strongly Attached dog owners are more likely to let their dogs sleep on the bed with them and to allow their dogs anywhere in

their houses compared to the other two segments. However, with regard to liking to travel with their dogs, Strongly Attached Owners and Basic Owners have higher means than Moderately Attached Owners.

Appearance Factor. This factor represents the extent to which a dog owner attaches value to and chooses his/her dog based on the dog's

Table 7: Comparing means for the Boundaries/Physical Proximity factor across clusters

	<i>Strongly attached owners</i>	<i>Moderately attached owners</i>	<i>Basic owners</i>	<i>Significance levels</i>
<i>Boundaries/Physical Proximity variables</i>	3.74	3.28	2.49	0.000
I like having my dogs sleep on the bed with me	3.48	2.99	2.15	0.000
My dog is allowed anywhere in the house	3.95	3.55	2.76	0.000
I like to travel with my dog	3.79	3.32	3.79	0.000

Table 8: Comparing means for the Appearance factor across clusters

	<i>Strongly attached owners</i>	<i>Moderately attached owners</i>	<i>Basic owners</i>	<i>Significance levels</i>
<i>Appearance variables</i>	2.40	2.37	2.11	0.002
I chose my dog because it looks cool	2.07	2.04	1.85	0.031
I value my dog primarily for its looks	2.74	2.71	2.39	0.003

Table 9: Comparison of factor means across genders

<i>Factors</i>	<i>Female</i>	<i>Male</i>	<i>Significance levels</i>
Dog-Oriented Lifestyle	3.98	3.87	0.012
Anthropomorphism	3.45	3.28	0.007
Structure and Discipline	3.04	3.12	0.196
Utility-Oriented	2.04	2.11	0.247
Boundaries/Physical Proximity	3.31	3.17	0.063
Appearance	2.19	2.54	0.000

perceived looks. As can be seen in Table 8, dog owners in all three segments indicate different levels of disagreement with the two statements in this factor. The factor means as well as the means for each of the two individual items representing the appearance factor differ significantly across the three segments. Strongly Attached Owners and Moderately Attached Owners have relatively higher means, indicating relatively weaker disagreement than Basic Owners. Furthermore, dog owners in all three segments disagree that they value their dog based on its looks.

Comparison of factors between females and males

Because past research on dog–human companionship has shown significant differences between females and males,⁵ we present a comparison of the average sum scores for each of the six factors between females and males here. It shows mixed results (see Table 9). Means for Dog-Oriented Lifestyle, Anthropomorphism and

Appearance are significantly different for females and males, whereas those for Utility-Oriented, Boundaries/Physical Proximity and Structure and Discipline are not. Females' means are higher on Anthropomorphism and Dog-Oriented Lifestyle, and males have higher means on the Appearance factor. There are no significant interactions between gender and cluster membership.

Factor means were compared across other demographic variables with no significant differences found. This lack of differences across income, age, level of education and marital status corresponds with previous research, and indicates that these avenues of segmenting the dog owner market are unproductive for practitioners.

DISCUSSION

One of the principal findings to emerge from this study is that traditional demographic segmentation does not work in the dog-related market. Rather, it appears that dog owners can be more effectively segmented and targeted using dog-related consumer behavioral variables. It is not surprising that pet product marketers have begun recently to acknowledge that there is a newly emerging segment of strongly attached dog owners with changing perceptions of their relationships with their dogs. For example, in a current Blue Buffalo super-premium dog food television commercial, dog owners are referred to as 'pet parents'. A print ad for Merrick, another

high-end dog food, boasts, 'You know your pet is eating well when their food is featured in none other than *Gourmet* magazine'.

Merrick, one of the largest specialty pet food manufacturers in the United States (it produces over one million cans of pet food weekly and over 1000 tons of dry pet food monthly), has continuously posted strong double-digit growth throughout their corporate history, as demand for their product has consistently expanded among distributors and customers alike. Merrick is sold in over 6000 retailers in North America, most of which are specialty stores, the type of outlet that Strongly Attached Owners tend to shop at due to the more expensive, better perceived quality of extras like toys, treats, apparel and accessories.²⁶

This key trend is also obvious when looking at the nation's big box pet product retailers. PetSmart for example has its own PetSmart Boutique, with the slogan: 'Indulge, Pamper, Spoil', along with an exclusive Martha Stewart Pets line boasting, 'Unique style and innovative designs'. There are 242 natural and organic pet food choices on its website. Petco also exhibits this same changing product mix with its Pampered Pets Shop and wide selection of organic and holistic dog food. Petco's current advertising campaign uses an anthropomorphic theme featuring Buster, the canine CEO of the company, with the dog's perspective on products.

It is reasonable to assume that the strongly attached dog owners making up this high-end segment (approximately 14 per cent of the overall dog-related market according to the American Pet Products Association)²³ have already been convinced of the value-added benefits of premium dog products and are the early adopters driving the growth in this product category. Marketing strategies should now begin to focus on luring the larger segment of moderately attached dog owners over to this orientation. A productive strategy for accomplishing this would be to harness the social influence of the early adopters, who are much more informed consumers and might also be opinion leaders among dog people. Dogs facilitate social interaction among dog owners, even those who are strangers⁵ and dogs are socially conspicuous.

Dog people talk about food and stores and new products in the places where dog people gather, such as dog parks. This effect is enhanced by the growing number of online social networks catering to pet parents such as Dogster.com. These online portals are a place for dog lovers to connect and become good friends. These websites are also a venue for sharing knowledge on how to take good care of dogs and are where people discuss the latest news and trends in the pet industry. This two-step flow of information, along with the growing availability of super-premium dog products should lead to significant growth in this high-margin market.

LIMITATIONS AND FUTURE RESEARCH

Because of the online referral method of sampling that we used in this study, our sample is more affluent and educated than the average American household. Therefore, our results may not be generalizable to the overall dog-owning public. However, it is likely that our sample more closely corresponds to those growing market segments targeted more heavily by major dog product marketers. This is especially true given the direction this market is going in, with more of an emphasis on higher-end, time-saving products, and the previously mentioned fact that the entire pet industry growth is being driven by high-income earners. Another possible limitation to the generalizability of our results is that it is also likely that the majority of our sample resides in the Southern United States, even though we gathered the data online. Dog owning is more prevalent in this region than in other parts of the country, which might systematically affect how people experience the dog-human relationship.⁵

Future research in this area should include an empirical investigation of the specific spending patterns within each of the market segments identified in this study, including where each segment shops, what products and brands are most popular with each segment and why, how much each segment spends in each product category, and what particular consumer behavior patterns each segment exhibits. In addition, psychographic in-depth profiles of each segment

would facilitate more differentiated targeting and positioning strategies.

As dog owners are getting more product information from dog-oriented social networks, it would be invaluable to marketers to find out the nature of such information exchange and how much influence it actually has on dog owners' consumer behavior. This might also be an appropriate venue for a more qualitative study of self-identified strongly attached dog owners to see what their primary motivations are and how they might be targeted as opinion leaders.

Finally, the changes in the US dog-related market have international relevance as well. In China, 20 years ago there were hardly any dogs in Beijing, and the few that were there stood a chance of landing on a dinner plate, where even today one can find dog-meat dishes. But now it is easy to find dog-treat stores, dog websites, dog social networks, dog swimming pools and even a bring-your-dog cinema and a bring-your-dog bar on Beijing's downtown nightclub row.²⁷ It would be interesting to see if segments similar to the ones we identified in the US market are characteristic of the Chinese market as well. In general, international comparative studies of the United States and other dog-related markets would be fascinating from a cultural perspective, especially as dog–human relationships are evolving.

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